SOUTH DEALER ISSUE
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rasshoppers Pose erious '57 Threat n New Mexico

2½ Million Acres of Range, 196,000 of Cropland Threatened

STATE COLLEGE, N.M. — Grass- ppers and more grasshoppers . . . at's what farmers and ranchers in New Mexico counties may expect 1957. The forecast is based on a cently-completed survey of adult ppers and their egg-laying activity roughout the state.

Officials of the Grasshopper Control roject, under the supervision of G. Fulkerson, Albuquerque, who made he survey, say hoppers infest ap- roximately 196,000 acres of cropland 19 counties. Curry, Roosevelt, tero and San Juan counties appear be the real trouble spots for 1957. dult hoppers are also active on izeable areas of cropland in Ber- alillo, Colfax, Grant, Guadalupe, ea, Lincoln, Mora, Quay, Rio Arri- a, Sandoval, San Miguel, Santa Fe, ocorro, Taos and Valencia counties.

The insects pose a serious threat to more than 2½ million acres of rangeland in New Mexico. Almost a million of these acres are in Colfax and Catron counties.

Grasshoppers were also found on most 348,000 acres in Union Coun- , 270,000 in Lea, 127,000 in Quay nd 100,000 acres in Harding Coun- . Hidalgo, Curry, DeBaca, Roose- elt, Lincoln, Sierra, Torrance, Grant, ddy, San Juan and Chaves counties lso have large acreages of range- nd populated with the egg-laying ests.

Construction at National Potash Mine on Schedule

— See Photos on Page 20 —

NEW YORK — Construction work at National Potash Co.'s new mine near Carlsbad, N.M., is proceeding on schedule with shipments due to begin in February.

Richard C. Wells, president of the company which is jointly owned by Freeport Sulphur Co. and Pittsburgh Consolidated Coal Co., said that the two mining shafts are down to the ore level, the 21-mile water pipeline is in operation and the refinery and other facilities are nearing completion.

The $19,000,000 project will have an annual capacity of 400,000 tons of high grade muriate of potash guaranteed 60% K_2O. The company will offer fertilizer manufacturers a granular product of minus 10 plus 28 mesh and a standard product of minus 28 plus 48 mesh, Mr. Wells said.

Product storage buildings, already completed, have a capacity of more than 100,000 tons. Provisions are being made for quick loading of the bulk or bagged product into covered hopper cars or standard box cars, according to Mr. Wells.

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Government Soil Bank Goal For Wheat Still in Making Despite Farmer Sign-up Lag

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON — Despite the lag seen in the contributions to the soil bank from the winter wheat crop area, as shown by official reports from early state and county returns, the government's goal to take between 12 to 15 million acres out of wheat production in this new crop year is still in the making.

For the plant food industry, the early returns may be misleading signposts for next year's wheat crop, it is observed here, because the official reports of recent date are too "iffy," and fail to disclose what the final figure will be for land taken out of wheat, and what sized farms will be involved.

Inside analysis of the way winter wheat farmers regard the financial aspect—the pocketbook appeal to them—now seems to be that they plan to put into the soil bank acreage reserve program the maximum allowable commitment where drouth conditions appear to indicate an unfavorable 1957 crop.

USDA has already set apart $325 million as a target of soil bank funds for the entire new wheat crop—both winter and spring wheat. The allocation of these funds has been experimental since USDA has had no operating experience in this field of operation.

It has been learned in USDA that in the eastern states the allocated money has run out and Congressmen are requesting USDA to allot more money for their areas, since many soft wheat farmers now are willing to take out total wheat farm land for the soil bank.

It has also been learned that the government will probably expand its limitations on contributions of wheat farm land to the soil bank this year to more than the 50-acre or 50% of the land in wheat cultivation.

(Continued on page 21)

Organic Chemical Output Shows Gain

Synthetic Production Jumps 22% in 1955

WASHINGTON, D.C. — The U.S. Tariff Commission has released its annual report on the production and sales of synthetic organic chemicals in 1955. The combined production of all synthetic organic chemicals and their raw materials as a group is reported by the commission to be 74,949 million pounds in 1955—22% more than the 61,507 million pounds reported for 1954.

Total sales in 1955 amounted to 43,090 million pounds, valued at 5,590 million dollars, compared with 34,707 million pounds, valued at 4,537 million dollars, in 1954. These figures represent totals for chemical raw materials, and semifinished and finished products, and therefore involve considerable duplication. Preliminary reports were issued earlier this year covering the production and sales in 1955 of the several individual groups of organic chemicals and their raw materials.

One section of the report shows that the output of all finished organic chemicals and chemical products as a group in 1955, amounted to 29,317 million pounds, compared with 23,831 million lbs. the previous year.

The output of pesticides and other agricultural chemicals exceeded that of 1954 by 21%, the report said. Other synthetic organic chemicals also exceeded their 1954 records, by the following percentages: plasticizers, 32%; medicinals 20%; surface-active agents, 12%; and a miscellaneous group of chemicals, 20%.

Complete copies of the report, "Synthetic Organic Chemicals, U.S. Production and Sales, 1955" (Report No. 198, Second Series) may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. The price is 65¢ a copy.

Lime Plant Being Built in Oregon

PORTLAND, ORE. — A $1,250,000 chemical lime plant is to be completed near Baker within 90 days by Chemical Lime Co. of Oregon, headed by Anthony Brandenthaler.

Rising four miles northwest of the city on a 220-acre site, it will tap what is reportedly the largest known high-grade lime deposit west of the Rockies with 30,000,000 tons proven. Already on tap is enough raw material to supply Pacific Northwest needs for 60 years, Mr. Brandenthaler said.

Production will be 75,000 tons annually of chemical grade and hydrated lime for production of carbide, sugar, glass, steel, aluminum and paper products and in agricultural processes and raw material refining.

The quarry is eight miles from the plant and will crush more than 200 tons per hour with storage for 250,000 tons of unburned lime.

Robert G. Vervaeke, formerly with U.S. Gypsum, and for the last three years with Gladding MacBean, is in charge of installation and will be general manager of the lime plant.

WASHINGTON WIRE

Economists Hear Warnings of Growing Government Encroachment on Farming

By JOHN CIPPERLY
Croplife Washington Correspondent

WASHINGTON—Some candid observations of the state of U.S. agriculture and stern warnings concerning further encroachments of the government in the farm communitv were made at the recent California meeting of the American Farm Economics Assn.

Unfortunately, the statements and conclusions reached at the economists' meeting were not widely disseminated in the daily press. But a careful gleaning of some of the talks made at the meeting offers some thought-provoking statements.

Among the leaders in the field of farm economics who spoke were Chester C. Davis, former banking executive and U.S. Department of Agriculture official; Jesse W. Tapp, chairman of the board of directors, Bank of America; Theodore W. Schultz, University of Chicago; Don Paarlberg, economic advisor to Ezra Taft Benson, secretary of agriculture, and George L. Mehren, University of California-Giannini Foundation of Agricultural Economics.

In a significant speech, Mr. Tapp said that the "need of the moment is to discourage excessive promises of some quick, easy answer by the legislative route . . . no one is promising to governmentalize farming . . . nevertheless, many of the proposals which have substantial support would, if carried out, take farming further down the road to government control.

"Another need is to get rid of some well established illusions about the effectiveness of price supports, acreage controls, the Soil Bank as a

(Continued on page 20)

Wall-Western, Great Western Form New Sales Agency

PORTLAND, ORE.—The industrial chemical division of Wall-Western, Inc., Portland, has merged with Great Western Chemical of Oregon to form a new sales agency and distributor organization for agricultural and industrial chemicals and raw materials under the name of Great Western Chemical.

W. C. McCall and Richard H. Wilson, principals of Great Western and F. Allen Wall, president of Wall-Western, will operate the new company. Mr. Wall will be executive vice president of the expanded organization.

Great Western merged with Wilson Chemical of Portland last year and also affiliated with the chemical and raw material division of Carl F. Miller Co., Seattle.

The firm will now have complete lines and facilities to service industry and agriculture in Oregon, Washington, Idaho, British Columbia and northern California.

Wall-Western's industrial and mill supply division was not involved in the merger but will continue to supply lumber, timber and plywood operations throughout the Pacific Northwest.

Diamond Expansion

CLEVELAND—Diamond Alkali Co., Cleveland, has reported plans for a multi-million-dollar expansion program at the firm's Deer Park plant along the Houston ship channel near Houston. In making the announcement, Frank Chrencik, general manager of the company's electro chemicals division, said the project is designed to "increase Diamond's present daily production capacity of electrolytic products at Deer Park by approximately 40%, or 200 tons of chlorine, 220 tons of caustic soda, and 2-million cubic feet of hydrogen."

Western Group Plans Oct. 9 Meeting

SAN FRANCISCO — Henry C. Moore, president of Agricultural Aircraft Assn. Inc., will discuss "What Happens to Pesticides" in an address to the annual meeting of Western Agricultural Chemicals Assn. Oct. 9 at the Villa Hotel in San Mateo.

The all day meeting will begin at 10:00 a.m. with a business session preceded by a breakfast meeting of the directors, according to C. O. Barnard, executive secretary-treasurer.

Two other speakers are scheduled for the program. Harvey O. Banks, director of the California Department of Water Resources will discuss "The Organization and Research Work of the Department of Water Resources" and Allen F. Mather of the Agricultural Council of California will give an address on "California Agriculture and the Agricultural Chemicals Industry."

James Wirwille

VELSICOL TRANSFER—Jam Wirwille, formerly Velsicol Chemi Corp. agricultural chemicals sa representative in the Midwest ar has relocated to represent the co pany in the Southeast. His new ter tory includes North Carolina, Sou Carolina, Virginia and the Georg counties of Burke and Richmond. H headquarters will be at 3215 Kli Ave., Columbia, S.C.

New Fertilizer Leaflet Issued By Florida Bankers

WASHINGTON—A new leaflet e titled "The Florida Bankers Assn. A vocates Good Soil Fertility Practic Because . . ." has been prepared b the University of Florida and the N tional Plant Food Institute, especia ly for the Florida Bankers Assn., D Russell Coleman, executive vice pres dent of the Institute, has announced.

In the leaflet, the Florida Banke Assn. urges all Florida farmers "t take advantage of this (soil testing service in the interest of higher cro yield and more economic agricultura production." Brief instructions fo taking a soil sample are found on th back page of the leaflet, and farmer are asked to write for more detaile instructions to the soils departmen Agricultural Experiment Station Gainesville, Fla., or to inquire throug their local county agricultural agents

Dr. Coleman said that "this projec was made possible largely throug the work of Dr. F. B. Smith, head o the department of soils, University o Florida." Of the 40,000 leaflets print ed, 35,000 will be distributed throug the Florida Bankers Assn.; and 5,000 through the University of Florida.

The leaflet contains the statemen that "high profits in farming com from high per-acre yields" and em phasizes that "high per-acre yield depend in substantial measure on so fertility." Similar leaflets have bee prepared in cooperation with th land-grant colleges, bankers associa tions and the Institute, in six states and others are under preparation.

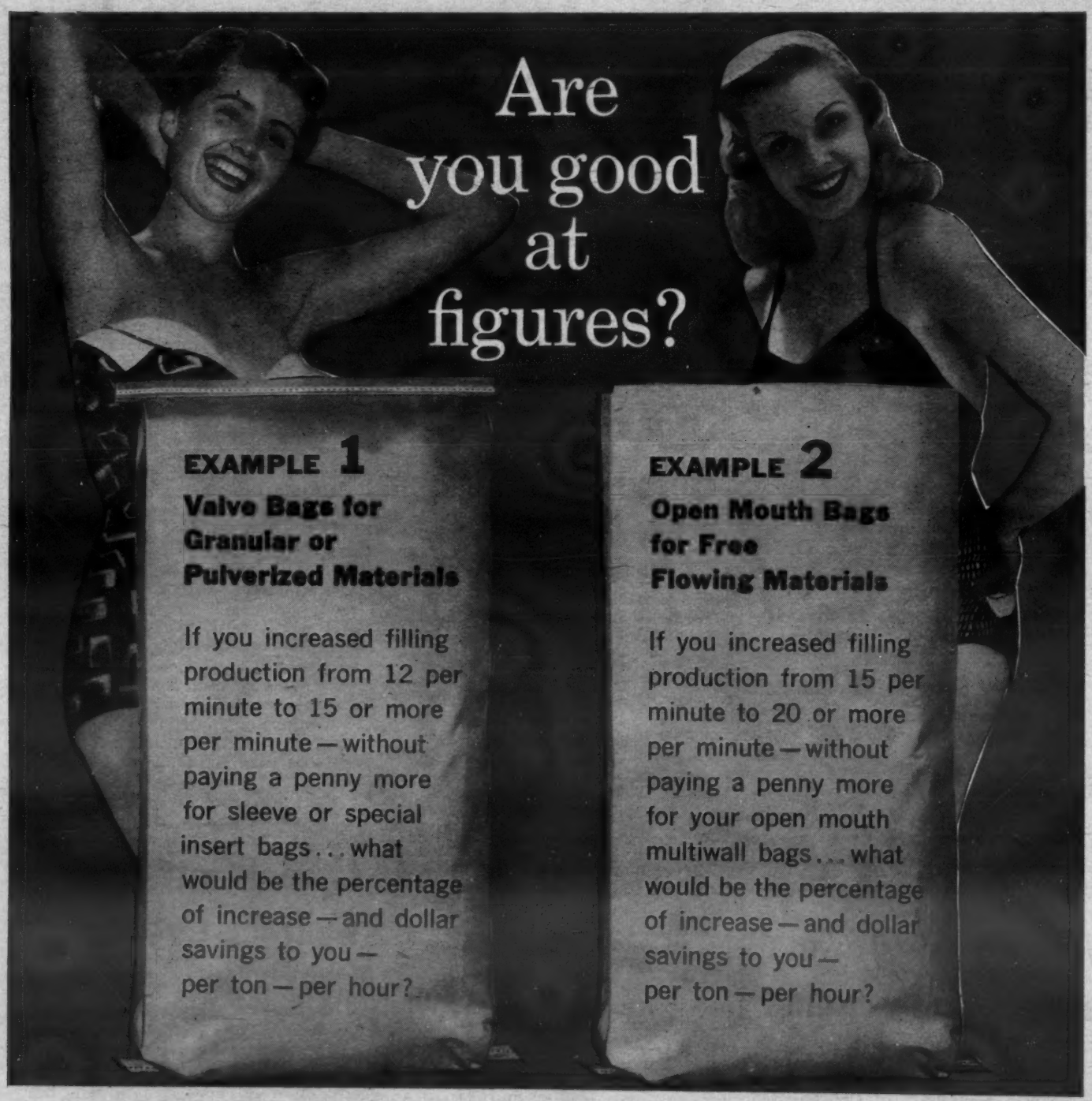
Rain Damages Cotton In South Carolina

COLUMBIA, S.C.—Rains accom panying the remnants of Hurrican Flossy as it moved across Sout Carolina were generally welcome t farmers, but some reported heav damage to cotton remaining unpicked

Anderson County appeared to b most severely affected. Damage t cotton, approximately half of whic remained unpicked in the fields, wa estimated as high as 50%.

WILLIAM Q. HARNED DIES

LOUISVILLE—William Q. Harned secretary and treasurer of the Fed eral Chemical Co. here, died Sept. 2 at the age of 73. He had been wit the firm 40 years.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EXAMPLE 2
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REASONS-WHY

you should take a new look at *today's* Farm and Ranch

Help, not entertainment

The South's number *one* business-of-farming magazine gets to the readers *first* with ideas and information which weren't available yesterday—but which will be *used* tomorrow.

Farm and Ranch is edited *solely* for farm families who *are* farming as well as they know how—but who *want* to farm and live *better*.

Quality circulation

The last three Starch surveys show Farm and Ranch has the highest-quality readers of any Southwide farm magazine.

No survey is infallible. But, could Starch be wrong—on the same side—for *three* straight reports?

And, a recent Farm Journal survey shows Farm and Ranch subscribers superior to Progressive Farmer subscribers in every category!

Top woman's editor

In a recent poll of all Home Demonstration Agents in the South, Farm and Ranch's Iris Davenport got 64.8% of the total vote on the question, "In your opinion, who is the outstanding farm magazine woman's editor in the South?"

What other editors think

Other editors rate Farm and Ranch the number one "buy" in the South. No other Southern farm magazine gets more than a small fraction as many reprints of its agricultural articles in house organs, trade papers, and other magazines.

And, Tom Anderson's "Straight Talk" is the most-read, most-quoted, most-reprinted, editorial page in the entire farm field.

Reader action

Farm and Ranch challenges the other Southwide farm magazine to show as low a "cost-per-order" on pattern sales, house plan sales, and circulation subscription sales.

Why pay more . . . for less?

Why pay $5600 for a black and white page in the other Southwide farm magazine (new rate effective February, 1957) when you can buy a page in Farm and Ranch for $4000? Take a look at today's

Farm and Ranch

NASHVILLE, TENNESSEE

ATLANTA	DALLAS	CHICAGO	NEW YORK	LOS ANGELES	SAN FRANCISCO
Bill Jones	Bruce Johnson	Dan Doody	Bob Finn	(McDonald-Thompson) Ed Thompson	(McDonald-Thompson) Roy McDonald

More than 1,300,000 subscriber families in 15 Southern states.

...gram Set for ...tilizer Industry ...nd Table

...ASHINGTON, D.C.—The Ferti... Industry Round Table discus... of manufacturing methods and ...nology is scheduled to be held at ... Shoreham Hotel, Washington, ... Oct. 16-18. Under the general... of Dr. Vincent Sauchelli, Davison ...mical Co. Div., W. R. Grace & ... Baltimore, Md., the meeting will ...ure speakers and panelists cover... ...many aspects of fertilizer tech...gy.

...e sessions will begin on the ...rnoon of Oct. 16, with a discus... of sampling of fertilizers and ...erials by J. Archer, International ...erals & Chemical Co. and D. ...ders, Swift Fertilizer Works.

...ther topics and speakers are ...eduled as follows that day: "Auto...ic Dry Sampler," P. E. Cook, Den... Equipment Co.; "Triple Super ...lytical Study," H. L. Marshall, ... Mathieson Chemical Corp.; "Sta...cal Quality Control," H. Replogle, ...ison Chemical Co.; and "Equip...t for Analytical Laboratory," ...ert Piper.

...he sessions will reconvene on Oct. ... with the following program: ...anging Technology in Granulation ... Ammoniation," T. P. Hignett, ...A; "New Developments in Am...niation and Granulation," E. Per..., Nitrogen Div. Allied Chemical ...Dye Corp.; and "Raw Materials in ...cessing Granulated Fertilizers," ... L. Hill, USDA, J. O. Hardesty, ...S., and J. Sharp, Spencer Chemi... Co.

...he afternoon session that day will ...e the following program: "Sackett ...w Star Granulator," A. Spillman, ...tilizer Mfg. Cooperative; "Flow...ors and Flow Control," A. Behler, ...her Porter Co.; "Temperature ...ntrol in Granulation," Brown Instr. ...., Minneapolis-Honeywell Reg. ...; "Feeders and Weigh Belts," Wal...e & Tiernan, Inc.; "Electrical Au...mation," Warren Seiffe, Link Belt ...; "Instrumentation in Dryer De...n," Louisville Dryer Co., and "Use ... Pulverizers in Granulation," ...yne King, W. S. Tyler & Co.

...he morning session of Oct. 18 will ...ntinue with these subjects: "The ...rr Ammonium Phosphate Process," ...ck Barber, Missouri Farmers ...sn., Plant Foods Div.; "Davison ...enton Granulation Process," J. E. ...ynolds, Davison Chemical Co. Div. ... R. Grace & Co.; "Dust and Fume ...ntrol in Granulation Processses," ...en Rose, Davison Chemical Co. Div. ... R. Grace & Co.; "Fans and Dust ...yclone Design," American Blower ...rp.; and "Methods for Collecting ...mes and Dust Samples," J. Gaskill, ...ine Safety Appliance Co.

...Final papers on the program will ...clude: "Controlling Caking in ...anulated Fertilizers," Edmund P. ...udson, Scottish Agric. Industries, ...berdeen, Scotland; "Aids in Select...g Types and Principles," part 1, ...ounter Current Drying of Drying, ...raight Tube, Smith-Douglass Co., ...c.; part 2 Concurrent Drying with ...Dehydromat, D. Leister, Renneburg ... Sons; part 3, Concurrent Drying ...raight Tube, Dr. F. Nielsson, Inter...tional Minerals & Chemical Corp. ..."Bags and Bagging"—Panel Discus...on, with participants including J. ... McDonald, Bemis Bro. Bag Co.; ... A. Arnold, St. Regis Paper Co.; ...J. Jacobi, Union Bag & Paper Corp.; ...nd O. W. McDuffie, International ...aper Co.

...Registration for the Round Table ...ill begin at 9 a.m. Tuesday and will ...ntinue throughout the morning.

...A luncheon will be given on Wed...esday, courtesy of the Potash Co. ... America, Washington, D.C.

...EW POSITION WITH GRACE

...NEW YORK—W. R. Grace & Co. ...as announced the appointment of ...chard L. Moore in its public rela...ons division.

H. I. Cramer Named to New Pennsalt Post

PHILADELPHIA, PA.—Dr. Howard I. Cramer has been named director, technical liaison, for Pennsalt Chemicals. In this capacity, Dr. Cramer will further the company's interest in foreign technological developments and the exchange of scientific information both in the U.S. and abroad, according to W. A. LaLande, Jr., vice president and technical director of the company.

Dr. Cramer was formerly with Sharples Chemicals, Inc. as director of development, which post he held when Sharples was acquired by Pennsalt in 1951.

GEORGE A. SCOTT TO RETIRE

SACRAMENTO—George A. Scott, chief of the Federal-State Crop Reporting Service, California Department of Agriculture, has announced he will retire Oct. 31 after nearly 39 years of public service.

Olin Mathieson Executive Attacks Transportation Tax

LITTLE ROCK — Transportation's share of the federal tax burden results in unfair charges to the public, an executive of a leading chemical firm said here Sept. 27.

D. G. Ward, assistant vice president of the Olin Mathieson Chemical Corp., made the charge before 300 delegates of the Southwest Shippers Advisory Board meeting at the Hotel Lafayette. The delegates were from Arkansas, Louisiana, Oklahoma, Texas and New Mexico.

Mr. Ward, who is chairman of the National Conference for the Repeal of Taxes on Transportation Charges, said the conference is attempting to convince Congress the taxes should be repealed in their entirety.

"The tax was imposed during World War II to raise revenue to meet conditions of the time," he said, "and inasmuch as the budget is now in balance, this is an unjust charge to the public."

Another speaker was J. J. Kelly, manager of the military transportation section of the Association of American Railroads. He told the board the Southwest will be critically short of freight cars for the next four years. He blamed the predicted shortage on the recent steel strike.

The purpose of the meeting was to let various shippers present their problems to railroad executives who try to determine ways to improve freight service.

Kolker Boosts Methyl Bromide Capacity

NEW YORK—Kolker Chemical Corp. has installed new facilities for the production of methyl bromide at its plant in Newark, N.J. When put on stream, the new unit will allow Kolker to double its present methyl bromide capacity.

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WORLD REPORT

By GEORGE E. SWARBRECK
Croplife Canadian and Overseas Editor

The production and consumption of fertilizers in Middle Eastern countries is growing rapidly. In comparison with world usage, the total offtake in a year is not great; it is the rate of growth that merits comment.

In 1938 the area was using around 90,000 tons a year; in 1955-56 the total rose to 230,000 tons. Eighteen years ago Egypt was using 94% of the production but other countries have come along strongly so that Egypt, while still the biggest user, is now taking only 55%.

Turkey, Egypt and Israel rank as the three biggest producers in the area. Production of superphosphates has risen from 82,000 tons in 1950 to 200,000 tons today. Particularly noteworthy has been the progress made in Israel. (Croplife, Oct. 1, page 18.)

Egypt is making expansion plans, too. A new ammonium nitrate plant, expected to be in production by 1960, will have a capacity of 370,000 tons a year. Turkey also plans production increases. In Jordan a company has been formed to manufacture upwards of 100,000 tons of potash annually. Yet another project, still in the talking stage, would provide a similar amount of superphosphates.

Controls Relaxed

The government of Australia has relaxed controls on the export of fertilizers as part of a program to increase the country's income from overseas sources. Several new plants have come into operation in recent years because of the increasing demand from farmers. Superphosphate production is now running at more than 2.3 million tons a year while sulfuric acid is approaching the million ton mark.

Fertilizer by Air

Complete success is reported by Illovo Sugar Estates, Natal, Africa, in its use of aerial spreading of fertilizers. In the summer of 1955 more than 5,500 acres of alluvial flats were fertilized and this year the program has been stepped-up. The result is a remarkable increase in the yields of sugar cane, officials say. Undul hillsides became easy of access the air.

The aircraft company hired for job—it is engaged in dropping mone weed killers over Cape wh fields during the winter—has sho ed pellets of urea or ammonium trate over the Illovo sugar lands when the crop needed nitrogen.

An official reports: "The result the applications were still apparen the fall, and during the prolo drouth early this year, the sugar retained its green appearance, turning yellow as is usual u drouth conditions."

The only retarding factor is cost; tests are being made to ins that the operation is economic worth while.

British Record Usage

Britain's farmers are reported have broken all records in t usage of fertilizers in the fertil year ended June 30, 1956. Last the weather was mild and farm got away to a good start with t winter wheat programs. The re was a big demand for fertilizers.

The big demand comes in Febru March and April and even reco were broken in this period, w manufacturers finding it difficult meet all requirements. In order encourage farmers to make their p chases out of peak periods, manuf turers offered rebates. During J and August the farmer could around 6% off; in January the d count was 2%. Part of the trade ca paign was devoted to pointing that modern fertilizer, especially granular type, can be stored with any loss in nutrient value.

Appointment

W. L. Nicoll, works manager the past 12 years at the Ayr fer lizers works of Scottish Agricultu Industries, Ltd., has been appoint deputy production and technical ma ager at the company's plant in Ed burgh.

Mr. Nicoll toured the U.S. in 19 as a member of the Anglo-Americ Productivity Team on chemicals. Du ing his time in Ayr, he was respon ble for the reconstruction of t works, the extension of the mai tenance shops and for several oth developments. Before going to Ayr 1944 he was in charge of sulfuric ac and fertilizer production at Aberdee

Oregon Grassland Fete Lauds Fertilizer Use

HILLSBORO, ORE. — Nearly 1 people attended the Oregon gras lands farm demonstration project the Lennox Blatchford farm ne Hillsboro, Ore., Sept. 21. The proje is the third to be sponsored by t Pacific Northwest Plant Food Asso ation—the others being in Washin ton and a current project at San point, Idaho.

The field day was held for de termining results of the first ful year on the Oregon project. Mem bers of the association, local busi nessmen, and members of the staf at Oregon State College, and pro ducers in the area were in attend ance.

The fertilizer program on the var ous sections of the farm has i cluded such materials as 5-10-10, a monium sulphate, ammonium nitrat boron applied through the sprinkl irrigation system, and muriate of p tash.

Last year the farm produced tons of hay and 135 tons of silage. 1956, the silage produced was 1 tons of hay and a little over 6 tons wheat. However during 1955 t farmer was short of feed.

This year there has been amp pasture—and there is ample pastu today. Mr. Blatchford has carried cows on 17 acres of pasture fro April 15 until Sept. 1.

Walter Winchell accepts gift of $25,000 from Ralph G. Martin, president of Real-Kill, Inc.

Offers $25,000 for a bug—No Takers!

Despite nation-wide publicity, no one was able to claim $25,000 reward offered by "Real-Kill" for an insect that could not be killed by their new spray.

They have awarded the purse to Walter Winchell for the Damon Runyon Cancer Fund.

No contest was needed however to prove "Real-Kill" is highly effective. It is extra-potent because of Penick's synergist:

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Sulfoxide is available in a form suitable for your formulations, too. It will save you money and make your pesticides more effective. We'll be glad to send technical data, price and delivery information.

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Chemical Treatment Controls Molds On Berry Boxes

WASHINGTON—Treatment of berry picking boxes with a chemical fungicide—sodium orthophenyl phenate—is making substantial savings possible in berry processing operations in the Pacific Northwest, according to the U.S. Department of Agriculture.

Developed at the Puyallup, Wash., station of USDA's Western Utilization Research Branch, in cooperation with the Washington Agricultural Experiment Station, the method consists of adding 1.2% of the fungicide to water in which bales of thin wood are soaked before they are shaped into square picking boxes, known as hallocks.

Hallocks made from the treated wood last much longer than those not treated, USDA said. Tests showed that over 90% of the treated hallocks were still usable at the end of a year's harvest of strawberries, raspberries and blackberries. Less than 20% of the untreated hallocks were worth saving.

Northwestern berry processors require about 30 million hallocks yearly, which they supply to growers for use by pickers. Dirt, soaked-in berry juices, and mold growth cause deterioration of the hallocks. Wet weather hastens the loss. In some seasons, hallocks must be completely replaced twice, at costs of thousands of dollars to berry processors.

Alfalfa Aphid Still Troublesome In Colorado

FORT COLLINS, COLO.—Despite heavy infestations of spotted alfalfa aphid in some areas of Colorado, dehydrators report they have had little or no trouble processing this year's crop of alfalfa.

In its weekly report, the Colorado Insect Detection Committee disclosed the largest populations of the alfalfa pest are in southeast Colorado. In Otero County, a field survey at Rocky Ford showed 14,000 per 100 sweeps; LaJunta had 13,000 and Manzanola counted 12,000.

The aphid is also numerous in Pueblo County, with 13,000 at Blende and 14,000 at Avondale. Another large infestation is in Kit Carson County where scientists found 15,000 per 100 sweeps at a point 23 miles north of Burlington. Working 13 miles to the south, they counted 4,000.

A survey in Crowley County revealed 12,000 per 100 sweeps, while the report from Two Buttes in Baca County showed 4,000.

In northeastern Colorado infestations of the spotted alfalfa aphid are somewhat less, but still considered serious. Two surveys taken east of Laird in Yuma County gave counts of 7,000 and 8,500. At Holyoke in Phillips County the record showed 1,200. Lesser populations were noted in Sedqwick and Loqan counties.

Meanwhile, farmers in Weld and Boulder counties were advised (Sept. 20) to begin control measures for the alfalfa webworm. Heavy larval populations of this insect pest were moving from weeds into fall plantings of wheat and into sugar beet fields, according to the committee. Invasion of Weld County by the pale western cutworm was also reported.

CITRUS SEMINAR

FT. PIERCE, FLA.—The Indian River Citrus Seminar will convene for an annual two-day session here Oct. 10. Production problems, the Mediterranean fruit fly situation, citrus diseases and an inspection of the Indian River field laboratory will be featured during the meeting.

Alfalfa Aphid Spreads In West Virginia

BLACKSBURG, W.VA. — Infestations of the spotted alfalfa aphid, a new pest in Virginia, have been found in 27 of 55 counties surveyed, reports Arthur P. Morris, associate entomologist at Virginia Polytechnic Institute.

All counties in the west central district of the state, except Bath and Highland, are infected. Most counties in the east central district are infected. In southwest Virginia, Pulaski County reports trouble.

Mr. Morris also reports that corn earworms are damaging late soybeans in most of eastern Virginia, and insecticides applied by airplanes are being used extensively to control them. Fall armyworms, as well as earworms, have been reported in some soybean fields.

J. GIBBS PONDER DIES

ATLANTA, GA.—J. Gibbs Ponder, former sales manager for the Atlanta division of the Armour Fertilizer Co., died Sept. 17. He was 65. With the Armour company since 1915, Mr. Ponder was at one time manager of the Columbus division. He retired in 1947 as sales manager here.

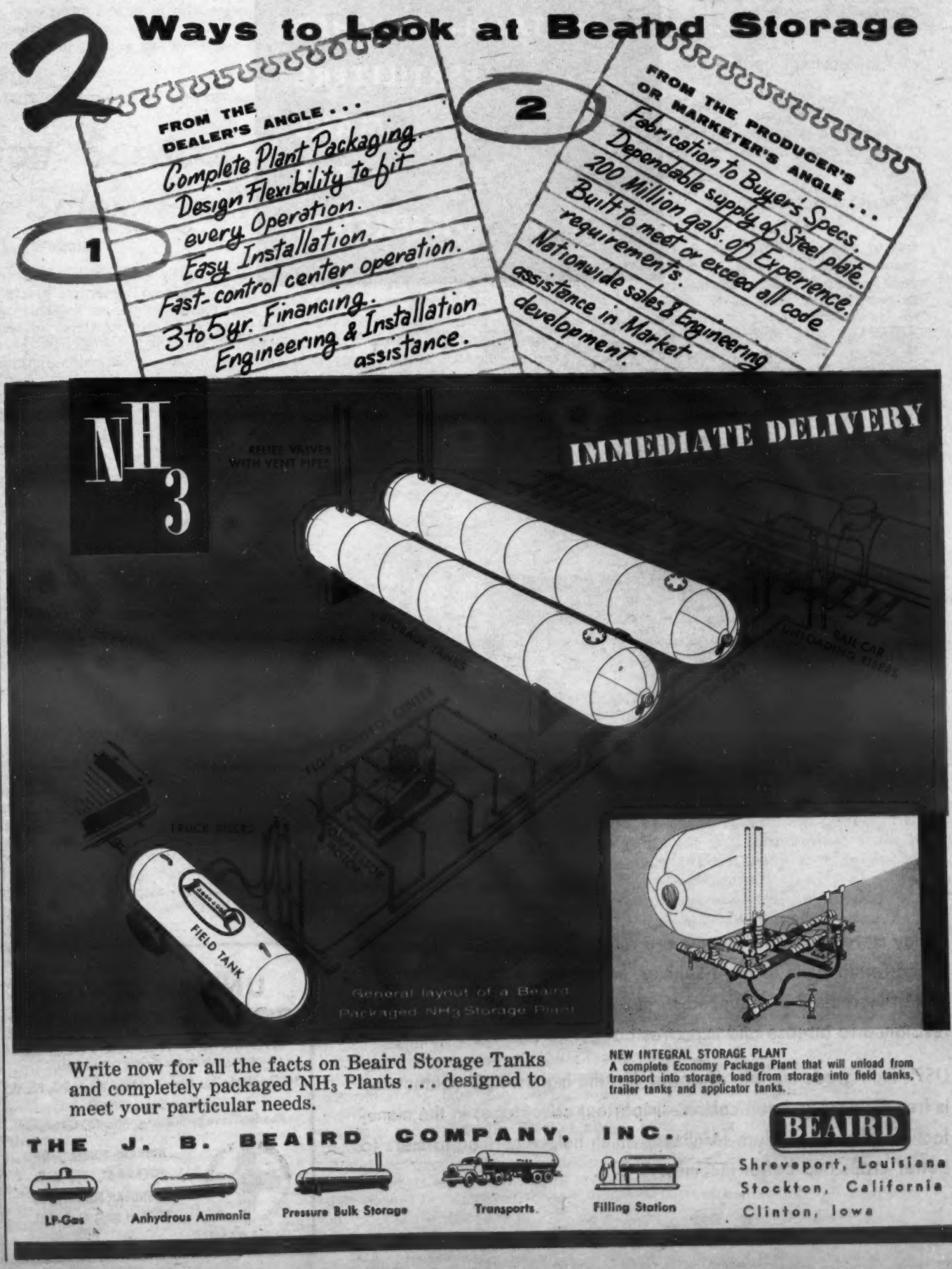
SMITH-ROWLAND IN NEW OFFICES—The Smith-Rowland Co. has moved into this new office building at 5100 Virginia Beach Blvd., just outside Norfolk, Va. Smith-Rowland executive offices, together with those of the parent Smith-Douglass Co. and the Coronet Phosphate Co. division, were formerly housed on several floors of the Board of Trade Bldg. in downtown Norfolk.

U.S. Borax Opens New Office In Portland, Ore.

NEW YORK—United States Borax & Chemical Corp. has announced the opening of a new office in Portland, Ore. to handle the development and sales of plant food borates in the Pacific Northwest. According to James A. Naftel, manager of the plant food department of the Pacific Coast Borax Co. division, Glen L. Holt has been assigned to this new office and is already operating in this area.

Mr. Holt graduated from the North Dakota Agricultural College in 1952 following his services with the armed forces in the Pacific. Before beginning his new work, he was employed by a fertilizer manufacturer in the Midwest.

With the establishment of this office in the Pacific Northwest, all activities in the development and sales of plant food borates will be handled by the plant food department.


2 Ways to Look at Beaird Storage
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A complete Economy Package Plant that will unload from transport into storage, load from storage into field tanks, trailer tanks and applicator tanks.
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Field Tests of New Herbicide Show Unusual Results

CORVALLIS, ORE.—First field tests with a new herbicidal material, "Simazin," sample quantities of which have been imported by its manufacturers, Geigy Co., Basle, Switzerland, have shown unusual results, according to William R. Furtick, Oregon State College weed expert. The compound, not yet on the market, has been tested at a number of agricultural experiment stations in the U.S., as well as by the U.S. Department of Agriculture.

Tests have been under way for two years, and Oregon State College, which had the first samples with which to work, has just concluded its first year's experiments under actual field conditions. Mr. Furtick who was in charge of the tests, says that the material has proved to be completely harmless to corn, and that it controls both annual and perennial weeds. In an interview with Croplife, Mr. Furtick indicated that enthusiastic newspaper reports about the product have not been exaggerated, and that the herbicide has shown up well in its first year of field testing.

The compound, Mr. Furtick said, is not a relative of 2,4-D, but is more closely akin to the amino triazole type of herbicides.

The researchers emphasize, however, that experiments thus far are only the beginning of what must necessarily be a long series of tests, particularly in determining the residual effect of the material in soils, and of course, toxicological studies.

Mr. Furtick states that he expects to plant a cover crop on the treated ground after the corn is harvested this fall.

Simazin is not commercially available in the U.S. and no announcement has been made as to when it will be. Mr. Furtick, along with other experimenters with the product, reminds that many tests still remain to be made and results of one year's experiments are only preliminary.

Faesy & Besthoff In New Quarters

NEW YORK — Effective Oct. 1, Faesy & Besthoff, Inc., moved its offices to new and larger quarters at 25 E. 26th St., New York 10, N.Y. Telephone number is MUrray Hill 4-2700. Faesy & Besthoff is manufacturer of a line of garden and home agricultural chemicals and a distributor of industrial and farm chemicals.

COOPERATIVE APPOINTMENT

PORTLAND, ORE. — Appointment of Bill Howard, formerly executive secretary of the Montana Farm Bureau Federation, as director of information and organization for Pacific Supply Cooperative with offices at Walla Walla, has been announced by Charles Baker, general manager.

William H. Wilson

William H. Wilson Named President of Virginia-Carolina

RICHMOND, VA.—William H. W son, 40-year-old executive from N Orleans, has been named as the n president of Virginia-Carolina Che cal Corp. He will be formally elec head of the $65,000,000 fertilizer a chemicals concern at a directo meeting in Richmond Oct. 29.

Mr. Wilson, a native of Sagina Mich., has been executive vice pre dent of the $45,000,000 Standard Fr and Steamship Co., which trades p marily in bananas from various cou tries of Central America.

He joined the executive staff V-C Oct. 1 and will make a tour the company's facilities throughc the nation before his formal electi as president.

At the same time, William Franklin of Baltimore, who has be serving as acting president since change in management control t months ago, has become permane chairman of the V-C board.

Mr. Franklin succeeds former Vi ginia governor John S. Battle board chairman. Mr. Battle will co tinue to serve as a member of t board.

Mr. Wilson attended Grand Rapi Junior College and was graduate from the University of Michigan. Fo lowing advanced studies at the Ha vard Graduate School of Busine Administration, he began his busine career in 1940 with the Illinois To Works where he rose to become a ministrative assistant to the pres dent.

In 1944 he joined the manageme engineering firm of Booz, Allen Hamilton in Chicago, where he serv as consultant to such concerns Radio Corporation of America, Squil and Columbia Pictures.

From 1946 to 1951 he served assistant to the executive vice pres dent of the Johnson Wax Co., the moved to New Orleans as executi assistant to the president of Standar Fruit and Steamship Co. Within a fe months he became vice president charge of operations and, in 1953, e ecutive vice president.

Commenting on his new post, M Wilson said:

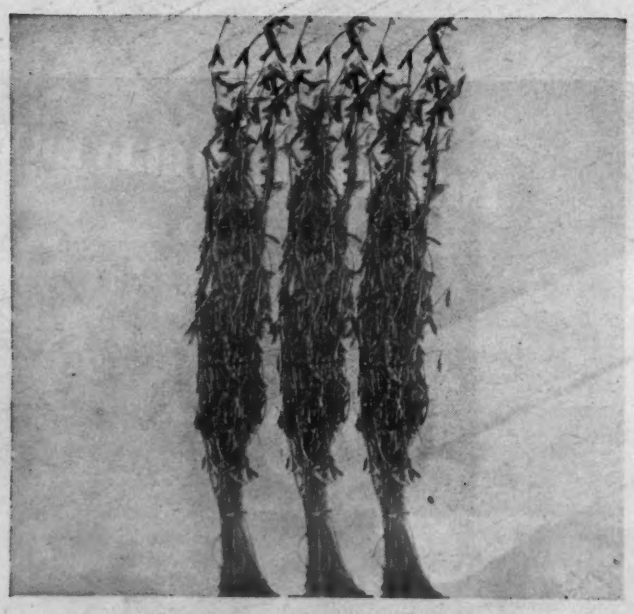
"This is a great opportunity to a real job with products and peopl I have a very favorable impression the kind and type of people I've m at V-C."

He also said that he did not inter to make any personnel changes. Hov ever, he indicated that some additio al people may be brought in to su plement the V-C staff.

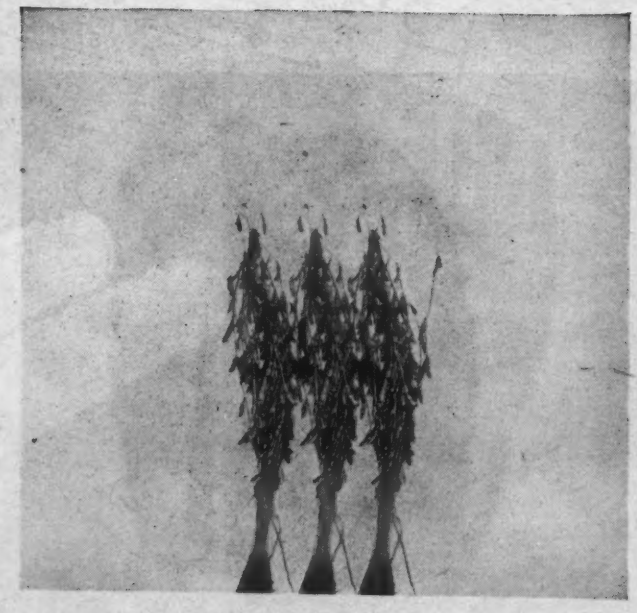
IN NEW POST

COLUMBUS—T. H. Parks, f many years extension entomologist Ohio State University, has be named consultant on crop insects f the Esmeralda Canning Co., Circl ville, Ohio.

IN SOYBEANS, POTASH-ENRICHED FERTILIZERS MAKE THE DIFFERENCE



with sufficient potash



without sufficient potash

Today more and more farmers are realizing the importance of balanced fertilizers in raising healthier, more vigorous crops. Potash is a vital ingredient in balanced fertilizers because it increases plant resistance to disease and improves both yield and crop quality.

USP's high-grade muriate of potash has the highest K_2O content and is free-flowing and non-caking—important advantages in the manufacture of these modern fertilizers which help American farmers to better crops and better incomes.

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Special Retail Section

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Richer Fields for Dealers

A SPECIAL CROPLIFE DEPARTMENT TO HELP RETAILERS IMPROVE MERCHANDISING KNOW-HOW

Georgia Provides Blueprint for Fertilizer Education

A series of 40 meetings were held in Georgia the past few months disseminate factual, basic fertilizer information. The unique program s planned by the Georgia agricultural extension service, in coopera- n with the Georgia Plant Food Educational Society. Because of the success the program achieved its conduct might well be a guide and an inspiration to industry leaders in other states. Details of the program are outlined in several articles appearing on this page and on pages 12, 13 and 14.

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ere Are the Highlights of Georgia's opular Fertilizer Education Program

A series of 40 meetings over the state were planned.
Fertilizer dealers, salesmen, farmers, county agents, vo-ag teachers and others interested in fertilizers were invited.
The purpose of the meetings was the dissemination of basic fertilizer information.
The meetings were conducted by two soils and fertilizer specialists of the Georgia extension service.
Information presented at the meetings was summarized in mimeographed material which was distributed prior to each meeting.
Extensive use of graphs and charts was used in getting the fertilizer story over.
Each meeting was well publicized in advance.
Each meeting was about two hours in length, followed by an open discussion.

ertilizer Education, Services ncrease Dealer's Sales, Profits

By Dr. Ralph L. Wehunt

Fertilizer is the most basic com- odity a Georgia farmer uses. With- t it he could not produce the yields ecessary to stay in business. Fer- lizer prices have advanced only % since 1935, while the prices of l other items farmers buy have dvanced 125% in the same period. his means that fertilizer, properly sed, is a better buy today than ever efore. Past records have proven that dollar invested in fertilizer will re- rn to the farmer from three up to even dollars or more. In general, no her investment a farmer makes ill return him that percentage in- ome.

The fertilizer industry is no longer by-product business: It is a highly echnical chemical industry, capable f standing on its own feet. Many mprovements have been made on echanical condition, new high nalysis material, availability of lant food and packaging.

Fertilizer represents a heavy out- y of cash for the production of rops in Georgia. Farmers in the tate spend millions of dollars an- ually for mixed fertilizers and ma- erials. It has been estimated that pproximately 25% of the total cost f producing crops is for fertilizer.

An increasingly important role as a source of fertilizer informa- tion is placed on the dealer during this era of rapid technological changes in the plant food indus- try. An important result of this trend is that a greater burden is placed on handlers of fertilizers to have available for farmer distribu- tion the most recent research in- formation on fertilizers and to be able to understand and answer questions raised by farmers.

The county agent is usually a good ource of information for the dealer, or he keeps up with the latest in- ormation on fertilizer through the xtension service, which obtains its nformation from the experiment tations.

Fertilizer dealers and salesmen have daily contacts with large numbers of farmers. They have many opportunities to show farmers that the use of fertilizer and lime, at proper rates and at the right time and place, increase profits as much or more than any other production practice available to the farmer. They can point out that through the proper use of fertilizer and lime a substantial savings in man power, fuel, equipment and other productive items can be obtained.

Surveys in other states have shown that fertilizer dealers and their manufacturers who work together to offer their farmer-customers "extra" services usually find that they sell more fertilizer than do dealers and manufacturers who do not perform these services. Both gross sales and percentage of income of dealers and manufacturers who participate in educational programs is usually greater than those who do not.

Fertilizer dealers in Georgia can assist their farmer-customers and county agents in many ways. They can promote soil testing and encourage farmers to follow recommendations based on soil tests. Dealers can mail samples to the state soil testing laboratories. They can explain how to take soil samples and have mailing bags available for their farmer-customers. Some type of soil test promotion program might be organized by dealers and various prizes offered to farmers. In connection with their regular advertisements of fertilizer, dealers and manufacturers might encourage farmers to have their soils tested.

Dealers can guide farmers in their choice of fertilizer and lime by acquainting them with college of agriculture recommendations. They can assist county agents in carrying out demonstrations of approved practices to observe the effects of fertilizer and lime on crop production. They can support county competition contests designed to focus attention on economical high yields through good fertilization practices.

Another dealer service popular with fertilizer customers is supplying them with agriculture college publications on proper use of lime and fertilizer. Dealers can erect signs in warehouses, explaining certain phases of proper plant food use in crop production. They can have a bulletin rack or information center in their stores with material from the agriculture college to supply farmers. They can discuss educational programs with bankers and help encourage more liberal credit terms for fertilizers.

What does all this mean to the dealer? It will help him become more aware of the services that farmers need and like. He will learn and be more capable of acquainting farmers with the why's, when's, and how's with regard to plant food. He will sell more fertilizer because he can back up sales talk with bona fide information from the agriculture college.

The dealer can view the progress

(Continued on page 14)

Here's the two-hour meeting schedule used in the well-attended series of 40 fertilizer education meetings held recently in Georgia

1. General introduction and purpose of meeting, by County Agent, 10 min.
2. Talk, "Do Fertilizer Education and Services Pay?", by Dr. Ralph L. Wehunt, extension agronomist, soils and fertilizer specialist, 15 min.
3. Talk, "Lime—A Problem in Soil Fertility," by Dr. Wehunt, Georgia extension agronomist, soils and fertilizer specialist, 15 min.
4. Talk, "What's In Mixed Fertilizers," by P. J. Bergeaux, Georgia extension agronomist, fertilizer specialist, 20 min.
5. Recess, 10 min.
6. Talk, "Nitrogen, The Key to Maximum Crop Productivity," by Dr. Wehunt, 15 min.
7. Talk, "More Profit From Efficient Use of Fertilizer," by Mr. Bergeaux, 10 min.
8. General discussion by panel composed of speakers, a member of the fertilizer industry and moderated by district agent or county agent, 25 min.

SHOP TALK OVER THE COUNTER FOR THE DEALER

By EMMET J. HOFFMAN
Croplife Merchandising Editor

Recognizing that his company's merchandise differs from items generally handled in farm supply stores, G. R. Berger, Sears, Roebuck & Co., Chicago, offers some observations which are nevertheless applicable to dealers of farm chemicals.

Mr. Berger points out that "we all share a common goal . . . the development of a store which is practical and economical from an operating and selling viewpoint, and attractive, easy to shop in and full of sales appeal from the customer's viewpoint."

The basic principles of merchandising are well established and apply very generally and very broadly to almost all merchandising and store operations, Mr. Berger says. All that is necessary is an adaptation of the principles and a variation of the techniques to suit the merchandise and the particular market in which the dealer is operating.

Mr. Berger outlines how Sears determines the amount of space required in a store, based on potential business, and how the selection of merchandise is made. Generally speaking, he states, the market area dictates the lines and items that should be carried. Then a decision is reached as to the amount of space that should be allocated to each line on the basis of past sales.

Mr. Berger urges dealers to find out through merchandise records which are the best sellers and then "concentrate on these lines and items both in your buying and selling."

Play the Winners

"Play the winners—reduce the amount of fringe merchandise—the slow selling items . . . Don't waste space on merchandise that will not produce sales and profits," Mr. Berger says.

In this connection the Sears mer-

(Continued on page 16)

What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6482—Garden Chemicals Folder

A new folder on garden chemicals has been published by E. I. du Pont de Nemours & Co. "Chemicals are garden tools as necessary as hoes and rakes," according to the folder. Such products as fruit tree spray, dormant spray oil, rose spray-duster, rose insecticide and fungicide, garden insect sprayers, floral dust, tomato dust, vegetable garden dust and a variety of chemicals for weed control in lawns and gardens are described in the folder. A number of illustrations of insects and plant and vegetable diseases, as well as of product containers, are shown. Check No. 6482 on the coupon, clip and mail it to Croplife to secure the folder.

No. 6483—Wood Preservative

A new folder on the wood preservative called by the trade name Carbolineum, has been prepared by the Carbolineum Wood Preserving Co. The folder claims that the product doubles the life of wood, stops termites easily and surely and stains wood a nut brown color. It adds that one application a year on poultry houses kills and keeps out chicken mites, blue bugs and fowl ticks. The product is recommended for posts, barns, cribs, poultry houses, cabins and cottages. Covering capacities are included in the folder. The folder may be secured without charge by checking No. 6483 on the coupon and mailing it to this publication.

No. 6484—Tractor-Shovels

Two new four-wheel drive, pneumatic-tired tractor-shovels have been announced by the Frank G. Hough Co. Part of the "Payloader" line, the model HH has a payload capacity of 1¾ cu. yd. and the model HU a capacity of 1⅓ cu. yd. The necessity of coming to a stop for a range shift is eliminated with a new "no stop" transmission. All shifts in both forward and reverse can be made without slowing down. Power steering and power brakes are provided. Complete specifications and literature on both models are available without charge. Check No. 6484 on the coupon and drop it in the mail.

No. 6485—Soil Sterilant

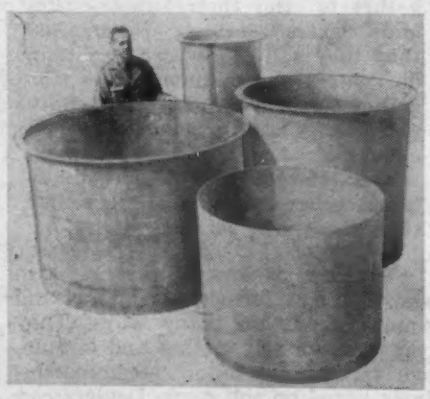
A four-page, well illustrated brochure, which describes a one-application method of ridding soils of weeds, weed seeds, fungi and nematodes, has been published by Stauffer Chemical Co. The publication places main emphasis on the treatment of tobacco plant beds. It states that fall treatment with Vapam, the temporary soil sterilant developed by Stauffer chemists and agronomists, permits spring seeding at the earliest possible date and eliminates the labor expense of weeding. The brochure outlines basic, easy-to-follow procedures to be employed in taking advantage of the product to eradicate all types of soil pests. Copies of the brochure are available, without charge, by checking No. 6485 on the coupon and mailing it to this publication.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6479—Farm Chemical Tanks

Corrosion-resistant polyester glass reinforced tanks are being offered by Haveg Industries, Inc. It is claimed that the tanks resist the attack of liquid fertilizer solutions, phosphoric and sulfuric acids as well as other fertilizers, insecticides and herbicides. Company officials say that the polyester glass tanks are also extremely light. The heaviest of those pictured is 150 lb., holds 600 gal. and can be



put in place by two men. Flat covers are available for all tanks. A wide range of sizes (up to 30,000 gal.) is available. The firm also designs tanks for individual requirements. Also available is a fume duct for removal of corrosive and obnoxious vapors, scrubbing systems and related accessories. Secure more complete details by checking No. 6479 on the coupon and mailing it to Croplife.

No. 5535—Steel Tank Brochure

A 16-page color brochure on bolted steel tanks has been issued by the Columbian Steel Tank Co. Described on the cover as "catalog No. 656," the brochure shows pictorially the tanks manufactured by the company for a large variety of purposes. Some of the uses include grain storage, water supply, the storage of dehydrated alfalfa under inert gas pressure and various liquids. Improvements in tank construction by the use of new synthetic gasket materials is pictorially described in a two-page section and one section includes a partial table of the American Petroleum Institute's dimensional specifications for bolted steel tanks from 100 bbl. to 10,000 bbl. capacity. Copies of the brochure are available free. Check No. 5535 on the coupon and mail it to this publication.

No. 6477—Fertilizer Hose

A new hose has been developed by Hewitt-Robins, Inc., to dispense liquid fertilizer from farm storage tanks. The hose is made with a synthetic rubber lining claimed to be resistant to ammonia nitrate solutions and petroleum products. The outer covering is green neoprene resistant to sunlight and oxidation. The hose is available in ¾-in. and one-in. diameters. Secure more complete details by checking No. 6477 on the coupon and mailing it to Croplife.

No. 6475—Film

A new film, "Low-Volume Spraying," produced by the Hercules Powder Co., is the seventh in a series of films dealing with insect control, now available from Hercules. The newest in the series, like the first six, is available in 16-mm., sound-and-color. It depicts the procedures for mixing insecticides and adjusting sprayers for efficient operation. "Low-Volume Spraying" is a 14-min. film. Secure complete details about securing film by checking No. 6475 on the coupon and mailing it to Croplife.

No. 6478—Rotary Feeder, Seeder

The Smith-Douglass Co. has introduced a lightweight fertilizer distributor and seed sower, called the Nutro feeder and seeder. It is carried on the shoulder and is designed to carry up to 25 lb. of material. Movement of a lightweight handle applies seed or pelleted fertilizer in a rotary manner. The advantage, say company officials, is the distributor's ability to distribute fertilizer or seed evenly and steadily without leaving any area uncovered. To secure more complete details check No. 6478 on the coupon and mail it to Croplife.

No. 6473—Seed Treating Unit

A new type of product called the liquid Adaptor is being marketed by Parsons Chemical Works. The product is used for converting the dust type automatic seed treaters to a liquid treatment process. It is all plastic and is claimed to be safe to use on any corrosive seeding treating chemicals such as various liquid mercury types. It is said to meet the specifications in those states where laws require dyed treated grain. A specification sheet which includes sectional drawings of the unit is available without charge. Check No. 6473 on the coupon and mail it to this publication.

No. 6480—Strawberry Weeds

Strawberry weed prevention with CRAG Herbicide-1 is described in a new strawberry folder released by Carbide & Carbon Chemicals Co., a division of Union Carbide & Carbon Corp. Company officials in announcing folder, state: "Growers and agricultural experiment stations report CRAG Herbicide-1 can save well over 75% of the labor that would go into handweeding and this new pamphlet shows how strawberry plants grow with increased vigor and give greater yields when strawberry rows are kept weedfree. The product kills weed seeds as they sprout and will keep out most broad-leaved and grass

(Continued on page 15)

Send me information on the items marked:

- ☐ No. 5535—Tank Brochure
- ☐ No. 6460—Bag Design
- ☐ No. 6461—Blight Booklet
- ☐ No. 6462—Insecticide
- ☐ No. 6463—Burn Treatment
- ☐ No. 6466—Bagging Cost Kit
- ☐ No. 6473—Seed Treating
- ☐ No. 6475—Film
- ☐ No. 6476—Soil Handbook
- ☐ No. 6477—Fertilizer Hose
- ☐ No. 6478—Feeder, Seeder
- ☐ No. 6479—Tanks
- ☐ No. 6480—Herbicide
- ☐ No. 6481—Insecticides
- ☐ No. 6482—Garden Chemicals
- ☐ No. 6483—Wood Preservative
- ☐ No. 6484—Tractor Shovel
- ☐ No. 6485—Soil Sterilant

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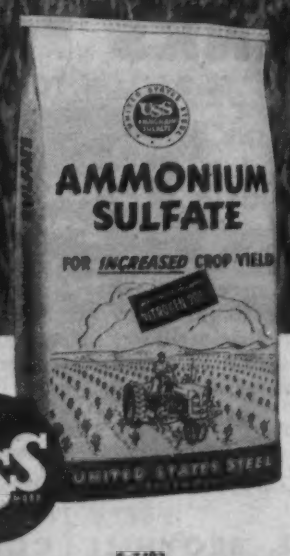
THINK that fall is the slow fertilizer season? It doesn't have to be! Fall fertilizing of pastures can be a real business-booster for you. Certainly every one of your customers is interested in getting the most out of his pastures. They can do it with a top-dress of USS Ammonium Sulfate.

Top-Dress Now

Sell your customers on top-dressing each acre of pasture with 200 to 300 pounds of USS Ammonium Sulfate. The nitrogen in ammonium sulfate will promote rapid recovery and lush pasture growth for late fall grazing. Growth like this means that farmers' pastures can support cattle later than usual. Start promoting fall sales of USS Ammonium Sulfate for pasture top-dress, now! Order your supply of USS Ammonium Sulfate, available in bulk or bag, from your mixer.



USS Ammonium Sulfate

USS

6-2483

UNITED STATES STEEL

CHARTS TELL THE STORY—Charts were used extensively at the 40 fertilizer education meetings held throughout Georgia during the past summer. At the left P. J. Bergeaux, fertilizer specialist at the University of Georgia, shows how much more fertilizer could be sold and used if accepted recommendations were followed. At the right Dr. Ralph L. Wehunt, soils and fertilizer specialist, University of Georgia, explains nitrogen leaching action.

What's in Mixed Fertilizers?

By P. J. Bergeaux

EDITOR'S NOTE

The components of mixed fertilizers, while familiar to persons in the industry, are not so well known by farmers and even by some dealers. Uninformed persons consider fertilizers as somewhat of a mystery. A 20-min. talk on what goes into mixed fertilizers was part of the fertilizer education meetings conducted across Georgia the past summer. Presenting the talk was P. J. Bergeaux, Georgia extension agronomist. His talk, the text of which is reprinted here, is an excellent guide to industry leaders in other states who are considering a fertilizer education project for their states. Mr. Bergeaux's talk contains basic information helpful to farmers and dealers in understanding the functions of fertilizers.

* *

The question is often asked why doesn't a 100-lb. bag of fertilizer contain 100 lb. of plant food. For instance, 100 lb. of a 4-12-12 fertilizer contains 28 lb. of plant food. What is the other 72 lb.? The answer is simple: The materials from which a fertilizer is made cannot be in the pure state for if they were they could not be used.

For instance, nitrogen in the pure state is a gas. The air we breathe contains about 80% nitrogen but it is of no use to the plant until it is combined with some other element. In nitrate of soda the other element is sodium. Phosphorus in the pure state when exposed to air will burst into flames. Potash in the pure state is very caustic and cannot be handled unless combined with some other element such as chlorine in muriate of potash. It is clear, therefore, that in order to use these plant food elements in a fertilizer they must be combined with some other element or carrier. These carriers are often also plant foods such as: Sulphur and calcium in superphosphate.

Phosphate

Next to nitrogen, phosphate is probably the most limiting element in Georgia soils. According to a summary of soil test data for Georgia, 51% of the soils was low in phosphate. Generally, north Georgia soils are lower in phosphate than south Georgia soils.

Plants generally require less phosphate for growth than nitrogen or potash. For instance, cotton producing at the rate of a bale to the acre will remove from the soil 65 lb. of nitrogen, 50 lb. of potash and only 30 lb. of P_2O_5.

The question then arises, "Why do we need such a high ratio of phosphate in our fertilizer analysis." The answer is the availability of the phosphate once it is applied to the soil. The phosphate is rapidly tied up in unavailable forms in Georgia soils, particularly on acid soils. Iron and aluminum phosphate compounds are formed in the soil and in Georgia they are unavailable to plants. It has been estimated that the relative efficiency of phosphate is 25%. In other words if 500 lb. of a 4-12-12 was applied to an acre of land, 60 lb. of phosphate would be added to the soil (12% of 500 lb.) but only 15 lb. would be available for plant growth (25% of 60 lb.). Liming a soil helps to release this phosphate tied up in unavailable forms.

A soil test is the best indication of the need for phosphate in a soil. In many cases where the soil phosphate is real low a recommendation of so many pounds of a complete fertilizer is not sufficient to take care of the necessary phosphate for the crop to be grown. In this case an additional amount as superphosphate or treble superphosphate may be necessary to bring up the phosphate level in the soil to where a successful crop can be grown.

Within the plant, phosphate encourages root development and in small grain strengthens the straw, thus decreasing the tendency to lodge. Phosphate also hastens the maturity of the crop and in this respect counteracts the effect of excessive nitrogen. A lack of phosphate results in a restricted root system and a bronzing or purpling of the leaves.

Phosphate for fertilizer purposes is generally derived from phosphate rock deposits. Phosphate rock (main deposits mined in Florida) is made up chiefly of one or more complex calcium phosphates containing fluorine and is insoluble in water. However, these compounds can be dissolved by dilute acids and the modern fertilizer phosphate industry is based on this chemical reaction. In the process the mineral phosphate is caused to react with an acid—sulfuric acid is the most generally used—and the resultant product called "superphosphate" is a mixture of water soluble phosphate and dilute acid soluble phosphate which although not soluble in water is considered available to plants.

Superphosphate containing 20% phosphoric acid (P_2O_5) and treble superphosphate 40-45% P_2O_5 (made by treating phosphate rock with phosphoric acid) are the most important commercial sources of phosphorus for plant food purposes throughout the world. Superphosphate ranks first in the fertilizer industry in quantity used, chiefly for the formulation of mixed fertilizers. Farmers use it to a considerable extent for direct application to the soil and to reinforce manures.

Important Sources of Phosphoric Acid

Material	Per cent phosphoric acid P_2O_5
1. Bone phosphate animal	
a. Raw bone meal	20-25
b. Steamed meal	22-25
c. Dry ground fish	4-8
2. Rock phosphate	
a. Florida rock	25-35
b. Tennessee rock	20-36
3. Manufactured	
a. Superphosphate	16-21
b. Basic slag	10-25
c. Treble superphosphate	40-50
d. Calcium metaphosphate	61-62

Potassium

Potash is another limiting elem in Georgia soils. South Georgia, w its sandy type soils, is more lacki in potash than north Georgia w its clay soils. According to soil te 70% of the south Georgia soils w low in potash while 41% of the no Georgia soils were low in this e ment.

Potash is not leached out of the s as readily as nitrate nitrogen, nor it fixed in the soil as readily as ph phate in unavailable forms. Theref we can build up the potash reser in the soil by heavy applications potash fertilizer. Once the pot level in the soil is brought up, as dicated by soil tests, potash fertili tion can be applied relative to crop being planted. Alfalfa requi more potash than corn. Alfalfa p ducing at the rate of three tons hay per acre will remove 135 lb. potash while corn producing at rate of 60 bu. per acre will remo only 70 lb. of potash from the soil. is evident, therefore, that alfalfa quires a fertilizer with a higher p portion of potash than corn.

Potash is often used as a side dre ing or top dressing material. It soluble in water and quickly availab to a growing plant.

Potash behaves as a catalyst and credited with doing these things: I creases vigor and health; mak stalks stiffer; improves the quali of plants; helps young roots to for and grow, and is involved in t plant's manufacture of sugars a starch.

Potash deficiency symptoms:

1. **Margins of leaves show scorched effect. Starting fi on the older leaves.**
2. **Plants grow slowly.**
3. **Stalks are weak and plan lodge easily.**
4. **Seed or fruit is small a shriveled.**
5. **Plants resistance to certa diseases is reduced.**

Muriate of potash is the compoun most generally used by the fertiliz industry as the source of potassium It is a concentrated salt having potash (K_2O) content of 60-62%.

Sulfate of potash is commonly use as the source of potash in the form lation of certain fertilizer mixtur used for certain varieties of tobacc

Potassium nitrate is used extensiv ly in the formulation of liquid com plete fertilizer.

Important Sources of Potash

Material	% Pota K_2O
1. Mineral	
a. Muriate of potash	50-62
b. Sulphate of potash magnesia	25-30
c. Nitrate of potash	46.6
2. Vegetable	
a. Cottonseed meal	1½-2
b. Tobacco waste	5-9
c. Wood ashes	3-7

Secondary Elements

There are other elements necessar for plant growth that do not ord narily appear on the fertilizer anal sis tags but are sometimes present the fertilizer as carriers of other el ments or as impurities. The fir group of these are called secondar elements. They are: Calcium, sulphu and magnesium. These elements a just as important to plant growth the primary ones, nitrogen, pho phorus and potash, but they genera ly are not as limiting in the soil.

Magnesium: Magnesium (Mg) important to the plant. It is an e sential part of chlorophyll or th green coloring matter in leaves. Thi green matter is responsible for har nessing the sun's energy and puttin it to work for the plant's use. magnesium-hungry plant will lack deep, rich green color.

Calcium: Calcium (Ca) is anothe of the important "fertilizing nutrien elements." It stimulates root growt and also adds strength to the ce walls. Some plants require larg

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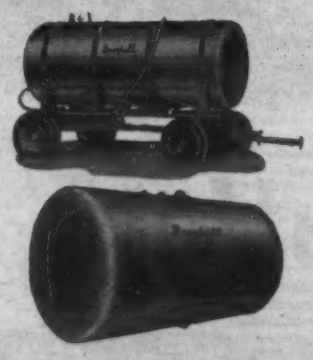
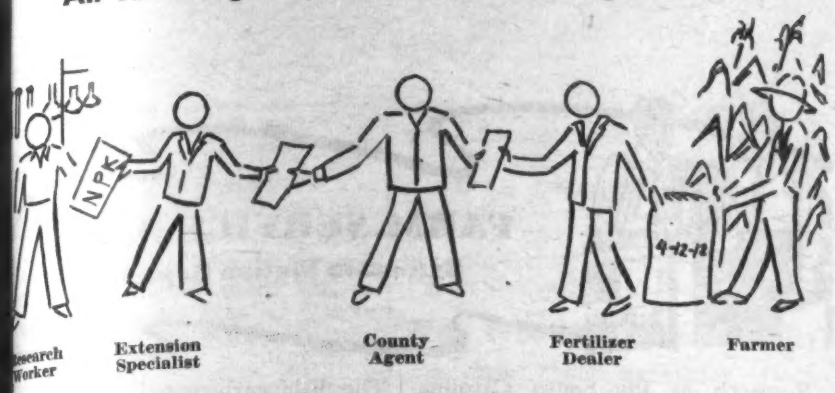


All Working Together to Make High Yields



mounts of it and are known as "lime overs." The legumes (alfalfa, clover, etc.) are of this kind. In the soil, calcium in the form of carbonate of lime is indispensable for the correction of excessive acidity and thus it promotes conditions favorable to the growth of desirable strains of soil bacteria needed to break down plant and animal residue.

Sulphur: Sulphur (S) is an important plant food element. If it were not for the fact that many fertilizers, such as superphosphate and the sulphates of ammonia and potash, provide a liberal supply of sulphur, this element would have to be added to the soil regularly. The introduction and application of highly concentrated phosphates, such as treble superphosphate and the use of it in manufacturing high analysis fertilizers may tend to bring about a sulphur deficiency in many areas.

Dolomitic limestone is one of the best sources of calcium and magnesium. It contains about 22% magnesium (MgO), and 30% lime (CaO). Calcium and magnesium requirements can usually be met by following a good liming program and using dolomitic limestone.

Trace Elements

The trace elements or minor elements as they are sometimes called, consist of the minerals, copper, manganese, boron, zinc, iron and molybdenum. These elements are necessary for plant growth but they are required in much smaller amounts than the primary elements.

Crops vary in their tolerance to some of these trace elements, and large amounts might be toxic to certain plants. Cotton, for instance, might be injured by application of as little as 10 lb. of Borax per acre, while alfalfa will usually benefit from 20 to 30 lb. of Borax per acre. According to research in Georgia, minor element fertilization is not generally recommended except for the following: Borax under alfalfa, zinc or rosetted pecan and peach trees and for corn in some sections of south Georgia where zinc deficiency has been observed.

As fertilization rates per acre are increased and higher analysis fertilizers are used, the need of trace elements in the fertilization program will tend to become more important.

Most fertilizers contain small amounts of these trace elements as impurities but this amount is so small that it is of little value in correcting any deficiency in the soil. Some fertilizers claim these minor elements in the fertilizer. Before a farmer pays a premium for this type of fertilizer he should be assured that he has a need for trace elements in his soil and that the fertilizer tag shows that sufficient quantities of these trace elements have been added to the fertilizer.

For a farmer to be sure of getting the most plant food for his money, he should:

1. Buy the fertilizer grades recommended by the college of agriculture, as those grades will usually supply plant foods at the lowest cost per unit or pound, as well as conform to the latest information on the best plant-food ratios for the particular soil and crop conditions involved.

2. Buy fertilizer on the basis of cost per unit or cost per pound of plant food rather than on the cost per ton alone.

3. Buy fertilizer with as high a total percentage of plant food as possible under local conditions. A 4-12-12 grade is a better buy than a 4-8-6 per pound of plant food.

Example of How a Mixed Fertilizer is Made
(Using a 4-12-12 Analysis)

One ton of 4-12-12 contains:
80 lb. of nitrogen (4% x 2,000 lb.=80 lb. N)
240 lb. of phosphoric acid (12% x 2,000 lb.=240 lb. P_2O_5)
240 lb. of potash (12% x 2,000 lb.=240 lb. K_2O)

We need 80 lb. of nitrogen in the ton of 4-12-12. Most fertilizer manufacturers use more than one source of nitrogen for various reasons such as to improve physical conditions. In this case 75% of the nitrogen will be derived from ammonia solutions (40% N) and 25% will be derived from ammonium sulfate (20.5% N.)

75% of 80 lb. N.=60 lb. nitrogen from nitrogen solutions
40% /60 = 150 lb. N solution
25% of 80 lb. N=20 lb. nitrogen from ammonium sulfate
20.5% /20 = 97.5 lb. ammonium sulfate
Using 20% superphosphate as source of phosphate for the 240 lb. P_2O_5 needed
20% /240 = 1,200 lb. 20% superphosphate
Using 60% muriate of potash as source of potassium for the 240 lb. K_2O needed
60% /240 = 400 lb. 60% muriate of potash
Total of above—1,847.5 lb.
Need 152.5 lb. filler to make a ton—152.5 lb. dolomitic limestone
Grand total—2,000 lb. of a 4-12-12 fertilizer

●

Nitrogen, Key to Maximum Crop Productivity

Ten minutes of the two-hour fertilizer education meetings held in 40 Georgia communities during the past summer were devoted to a discussion of nitrogen. Dr. Ralph L. Wehunt, Georgia extension agronomist, presented a talk entitled, "Nitrogen, the Key to Maximum Crop Productivity."

Dr. Wehunt said that the extremely low level of nitrogen used accounts in large part for the low average corn yield per acre in Georgia (22.5 bu. per acre in 1955). Profitable corn and cotton farming without nitrogen is impossible, he stated, though it must be supplemented with other good management and cultural practices.

Other sections of Dr. Wehunt's talk covered the following points: Forms of nitrogen utilized by plants and factors influencing their use, such as the type and age of the plant, reaction (pH) of the soil and, fertility status of the soil; movement of nitrogen forms in the soil (leaching); effect of form of nitrogen on soil reaction; secondary elements in nitrogen sources; effect of sources of nitrogen on yields, and the economics of nitrogen sources.

A half a dozen charts were used by Dr. Wehunt to illustrate points in his talk.

●

More Profit From Efficient Use Of Fertilizer

(The following article is the text of a talk given by P. J. Bergeaux, Georgia extension agronomist, at the 40 fertilizer education meetings held throughout Georgia the past summer.)

What would it mean to fertilizer dealers and farmers in Georgia if the approved fertilizer recommendations

The Bulletin Board

No. 22 in a series from the Spencer Chemical Magazine, "Today's Fertilizer Dealer"

The Spencer Question Box

Edited by
Proctor Gull
Chief Agronomist, Spencer Chemical Co.

"The Question Box" is one of the most popular features of TFD, Spencer Chemical Company's magazine for fertilizer dealers. Questions submitted by dealers are answered by Proctor Gull, head of Spencer's 7-man field agronomy team. Here are a few timely questions and answers from recent issues of TFD.

1. QUESTION: Will Fall fertilization work in the warm South as well as in the cooler North? What about nitrogen loss in case of a warm, wet December?—R. D. Dark, International Minerals, Pensacola, Fla.

ANSWER: Generally, fertilizer applied in the Fall in the South must be applied on a growing crop. In humid areas with high rainfall, losses through the ground water can be considerable, otherwise.

However, winter-growing pastures (and small grains to be used for pasture) present a great opportunity for Fall fertilization. They **must** be adequately fall fertilized in order to release optimum growth.

The application of fertilizer in the Fall for land to be used for row crops next Spring is probably wasteful in many areas of the South unless some cover crop is planted that will utilize the fertilizer in the Fall and return it to the soil next Spring.

Such an application of fertilizer to cover crops is an excellent way of building the soil for greater yields the following year.

2. QUESTION: Will 45% urea nitrogen do away with sales of 16% nitrate of soda in the future?—Lenwood Garnett, Boydton Farm Supply Co., Boydton, Va.

ANSWER: Your question of urea vs. nitrate of soda is a most interesting one. We believe the answer is quite simple.

We would like to include, however, in answering this question other sources of nitrogen, such as ammonium nitrate, ammonia and solutions containing various combinations of ammonia, ammonium nitrate and urea, as compared to nitrate of soda.

The answer is simply one of economics. Whichever source of nitrogen can be delivered to the farm at the lowest cost is the one that will be the most profitable to the farmer.

Essentially, the nitrate parts of nitrate of soda, urea and ammonium nitrate are no different from the standpoint of plant response. One difference between these sources is that urea, ammonium nitrate and ammonia have acid-forming properties that will require about 1½ pounds of limestone for each pound of nitrogen applied to neutralize the acid formed by the fertilizer (and to replace the lime removed by the crop).

Now the farmer cannot afford to pay much premium for the soda included in sodium nitrate, since soda does not replace the calcium or magnesium which is present as a plant nutrient in limestone. The soda only aids in correcting the acidity of the soil, and soda may be detrimental to some soils, causing puddling or poor physical condition.

Soda **is not** an essential element for plant growth. Therefore, there is no reason for selecting this form of nitrogen other than that it neutralizes some soil acids which can **more profitably** be neutralized by proper liming. In other words, a combination of some other form of nitrogen plus proper liming is the most economical.

3. QUESTION: What significance will nitrogen solutions have on the commercial fertilizer industry in the immediate future?—A. H. Meekin, Monticello Mercantile Co., Monticello, S.C.

ANSWER: Use of nitrogen solutions as a supplemental source of nitrogen has increased to a considerable extent in a few areas of the country. The increase will probably continue.

In some instances, solutions have substituted for other nitrogen sources such as anhydrous ammonia and solids. In other areas, they have increased the over-all use of nitrogen, and this probably has a tendency to increase in general the use of fertilizer. The more nitrogen used, the more phosphorus and potassium will have to be used in order to balance up the plant food diet.

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Crop	Additional fertilizer above that used (in tons of 4-12-12)	Additional nitrogen above that used (in tons of 20% nitrogen)	Possible increased farmer income above extra fertilizer costs
Cotton	97,000	52,000	$24,920,000
Corn	257,140	271,922	$125,775,000
Pastures	400,000	200,000	$50,856,000
Totals	754,140	523,922	$201,551,000

Cotton calculated at 32c lb. lint, corn at $1.50 bu. and beef 16c lb. In 1955 Georgia consumed 1,299,654 tons of fertilizer including nitrogen top and side dressings.

were followed? The accompanying chart indicates the potential of increased fertilizer use and increased farmer income if farmers would fertilize their crops according to the 1956 University of Georgia college of agriculture fertilizer recommendations.

According to a county agent survey in 1955, 192,000 tons of fertilizer and 65,000 tons of 17% nitrogen side dressing was used on 890,000 acres of cotton; 441,000 tons of fertilizer and 187,000 tons of 20% nitrogen side dressing used on 2,795,000 acres of corn and 250,000 tons of fertilizer and 95,000 tons of a 23% nitrogen top dressing used on 1,226,000 acres of temporary and permanent pastures.

It is apparent from the chart above that the greatest potential in expanded fertilizer use is on pastures and corn.

Had the approved fertilizer recommendations been carried out in 1955 on cotton, corn and pastures, an additional 1,258,062 tons of fertilizer and nitrogen materials would have been used which is just about double the amount that was actually used.

By following the fertilizer recommendations and other approved cultural practices, farm income can be increased by over $200,000,000.

●

Lime—A Problem In Soil Fertility

The role of lime and its importance in crop production was outlined by Dr. Ralph L. Wehunt, Georgia extension agronomist, in a 15-min. talk at each of the 40 fertilizer education meetings held throughout Georgia during the past summer.

In his talk Dr. Wehunt explained the meaning of "sour" and "sweet" soils, and said that every farmer should know the meaning of pH and form the habit of describing his soil by pH numbers. He explained why soils generally become acid in Georgia and told of the lime needs of the state.

Reasons for liming soils, according to Dr. Wehunt, are: (1) neutralizes soil acidity and furnishes plant nutrients, (2) increases bacterial activity, (3) influences nutrient availability, (4) reduces toxicity, and (5) promotes soil granulation.

In a section under lime requirement of soils, it was stated that the quantity needed will depend on the kind of liming material used, on the particular crop and rotation systems involved, on soil properties and other factors.

Some factors of lime application that should be considered are: Spreading it evenly; mixing it with soil properly; when to lime and frequency.

The merits of different kinds of lime were detailed by Dr. Wehunt. Among the kinds he mentioned were high calcium limestone, dolomitic limestone, hydrated or burned lime, marl, furnace slags and wood ashes.

"If profitable returns are to be realized from fertilizers, soil acidity must be corrected," Dr. Wehunt said. "Soil testing is the only practical method of making an immediate determination of the need for lime."

DEALER SALES AND PROFITS

(Continued from page 9)

of his community with greater pride, knowing that his assistance to farmers helped them to harvest more profitable crops.

The fertilizer dealer can not, however, do the job alone. He must have encouragement and assistance from fertilizer manufacturers, extension specialists and county agents. The extension specialists, working through the county agent, can assist in the development of county and community dealer programs. Demonstrations, fertilizer dealer schools and other educational procedures can be worked out in cooperation with dealers to assist them in acquainting farmers with the opportunities for more efficient use of lime and fertilizer. County agents can invite dealers to appear on radio programs to discuss what they are doing to effect county welfare by proper plant food usage.

Manufacturers could arrange schools for dealers and salesmen conducted by company agronomists and, if desired, with assistance from extension fertilizer specialists. Manufacturers could purchase or prepare literature on fertilizers to supply their dealers. Many other examples could be cited but these will suffice to show what can be done to assist dealers to become better prepared to help their farmer-customers.

At the present time too much emphasis is placed on selling fertilizer on the basis of "cost-per-ton." Greater stress should be given to the "cost-per-pound" of plant nutrients, to their proper utilization and to the profits that can be derived from them. More education and service will be profitable to both dealer and manufacturer. It is more logical to sell a farmer correct fertilizer know-how and to increase his application to proper levels than to try to save him a dollar or two per ton on fertilizer. The dealer who builds his business on education and service will have satisfied customers and will not have to worry about somebody else taking them away by price cutting alone. His customers will return year after year for more education and service, which in most cases will result in greater sales of fertilizer.

The organization of plant food educational material in a down-to-earth manner for dealers can be the inspiration and springboard for a more effective educational program in Georgia. A well-informed fertilizer dealer can make a real contribution to the area he serves. He has a challenge and an opportunity—a challenge to assist his farmer-customers in bridging the gap between modern fertilizer and lime know-how and its application—an opportunity to join forces with official workers in showing that plant food, used properly, can greatly increase farm income in his sales area.

AGRONOMY HANDBOOK

CLEMSON, S.C.—A revised pocket-sized edition of the Agronomy Handbook for South Carolina is being distributed by the Clemson Extension Service. It is Extension Circular 407. The circular gives brief statements on the 1956 fertilizer and crop variety recommendations for the state, and recommendations for the production of field crops, grasses and legumes.

FARM SERVICE DATA
Extension Station Reports

Research at the South Carolina Agricultural Experiment Station is showing that nemagon, a liquid nematocide, shows promise for controlling peach root knot.

H. H. Foster and L. W. Baxter, experiment station research workers in the botany department, found that when nemagon was applied around the roots of living peach trees at rates of five gallons per acre the treated trees showed good shoot growth, fair to excellent tree vigor and a good increase in tree trunk circumference. They tried nemagon at other rates varying from 2½ to 40 gal. per acre, but the five-gallon rate appeared to be the best treatment.

The orchard selected for the experiment was in Barnwell County. Trees selected for treatments were those which had roots that were moderately galled. An area of 100 sq. ft. surrounding the tree was treated. Nemagon was injected into the soil at approximately 12 inches deep and at intervals of every 12 inches. Trees within the same area of the orchard that did not receive any treatment served as a basis of comparison.

Mr. Foster points out that these experiments have only been conducted for one year and that no recommendation can be made at this time. Additional experiments were conducted this year but no data are yet available.

★

Valuable lessons for future years can be learned from studying summer grazing, advises W. H. Thompson, pasture specialist of the Mississippi Extension Service.

"I have learned two things in working with Johnson grass hay this year," he says. "First, that fertilizer not only makes more hay, but a better quality hay each cutting. Second, to get good hay it must be cut three or four times a year."

Another valuable lesson comes from observing pastures that were covered with bitter weeds, and where these weeds were killed with amine 2,4-D.

Experiment stations have found three good times to spray bitter weeds. The first is before the bitter weed seed has come up. The next is when they have come up, but are young and still growing fast. The third spraying period is when they have blossomed and seeded out. It takes two or three times as much amine 2,4-D to kill them when in the mature stage as when they are young, or before they come up, Mr. Thompson said.

"It is as easy to tell an area of bitter weeds that has not been sprayed as it is to find an area in oats that was not fertilized," Mr. Thompson says. "There are many pastures in the South that normally are covered with bitter weeds, but they have no bitter weeds because of spraying."

★

Two new materials are recommended this year in Virginia for control of weeds in tobacco plant beds. Dr. W. E. Chappell, plant physiologist at Virginia Polytechnic Institute Agricultural Experiment Station, says the materials are allyl alcohol and dithiocarbamate. The allyl alcohol is sold under the trade names "Bed Drench," and "Shell Weedkiller A." The dithiocarbamate is known on t market as "Vapam."

Dr. Chappell and J. L. LaPrad associate plant pathologist at t Chatam branch of the station, ha conducted tests for two years VPI, Chatham and Glade Spring, a report "generally good" control all weeds in tobacco plant beds, wi the exception of clover. Nothing h yet been found to control clover sa isfactorily, Dr. Chappell said.

The new materials are applied a drench, preferably in Octob Manufacturer's recommendatio should be followed carefully. Al alcohol and dithiocarbamate requi no working into the soil, and no pla bed cover. Beds should be left und turbed after treatment, and work very lightly just before seeding the spring.

Both the cyanamid and meth bromide treatments are still reco mended, Dr. Chappell says.

★

Successful control of Irish pota seed piece decay was obtained at t Clemson's Truck Station at Charle ton this spring, according to D W. M. Epps, head, Clemson botan bacteriology and plant pathology d partment. The cut potato seed piec were treated with streptomycin ju before they were planted.

Two methods of treatment prov effective: (1) Seed were dipped in solution containing 100 parts per m lion of streptomycin in water. (Seed were coated thoroughly with dust containing from 0.05% to 0.2 streptomycin.

Results of 1956 tests show tha plots planted with streptomycin treated seed produced stands rang ing from 88 to 98% and a yield o 235 to 292 bu. per acre. Untreate plots produced a stand of onl about 70% and a yield of 144 bu per acre.

Dr. Epps says the cost of t treatment was so small that tre ment would be advisable even thou seed-piece decay causes serious loss only occasionally. However, furth studies on a larger scale must conducted before the practice treating with streptomycin can recommended, he said.

★

Virginia peanut growers are no using a liquid pre-emergence wee killer made by the Naugatuck Chem cal Division, United States Rubb Co., after three years of field tes demonstrated it efficiently and ec nomically controls weeds that infe peanut fields.

Tests of the chemical on pean field weeds were started in 1952 Dr. W. E. Chappell, plant physiologi at the Virginia Agricultural Expe ment Station in Blacksburg. T weedkiller used was formulated ju for the tests by Naugatuck Chemic It is a liquid version of a weedkill marketed for several years for we control in cucumbers, cantaloup watermelons and other cucurbits.

In the Blacksburg tests the chem cal controlled 75 to 95% of the wee without reducing the yield or vig of peanut plants.

In his tests Dr. Chappell spray five pints of the chemical, per ac in a band over the peanut seeds rig after planting.

WHAT'S NEW

(Continued from page 10)

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...An illustrated booklet on the rec...nition and treatment of early and ...e blight in 18 different crops is ...ng made available by the Chem... ...m Division, Chemical Insecticides ...rp. Also desribed in the booklet ...the company's new fungicide devel...ed for blight treatment. Secure ...e booklet by checking No. 6461 on ...e coupon and mailing it to Croplife.

...o. 6460—Bag Design ...rends

...The part played by redesigned fer...zer bags in increasing sales is ...phasized by the Percy Kent Bag ... Information concerning trends ...d sources in bag design develop...nts is available from the company. ...mpany officials state that ferti...er brand identification and brand ...lling are important in convincing ...e farmer to choose a particular ...oduct. Display advertising on the ...oduct package offers a major op...rtunity to the fertilizer manufac...rer, it is claimed. Products in new ...ntainers—with the design revamp... to look cleaner, brighter, more ...dern and with the product bene... clearly pictured—enjoy an un...stakable sales boost, it is stated. ...cure more complete details by ...ecking No. 6460 on the coupon and ...iling it to Croplife.

...o. 6466—Bagging ...ost Kit

...A new "do-it-yourself" packaging ...k kit, designed to help fertilizer ...nufacturers figure bagging costs, ...available at no charge from Union ...-Camp Paper Corp. The kit con... ...s tables for determining the labor ...s per ton of material and per thousand bags at varying production rates. Also enclosed is a chart which figures the cost of multiwall bag closing materials (cotton thread, rayon thread and filter cord) as well as a bag cost comparison sheet. Secure the kit by checking No. 6466 on the coupon and mailing it to Croplife.

No. 6462—Insecticide

A new liquid insecticide, trade-named Drinox, has been placed on the market by Panogen, Inc. The product contains aldrin and is claimed to be "effective in protecting newly planted seed and young seedlings from attack by wireworms, seed corn maggots and a variety of other soil-dwelling insects." It is recommended for treating wheat, oats, barley, rye, cotton, corn and sorghums. Seed germination is not harmed, it is claimed, and the product comes as a true solution (not a slurry), ready to use without mixing or diluting. For further information check No. 6462 on the coupon and mail it to this publication.

No. 6463—Treatment For Burns

A product called by the trade name, G-63 burn relief spray, is being produced by the General Scientific Equipment Co. It comes in a push-button spray bomb and the product is claimed to treat burns and protect the skin with a cooling emollient film. Secure more complete details by checking No. 6463 on the coupon and mailing it to this publication.

Farmers in Texas Cotton Area Using More Water, Fertilizer

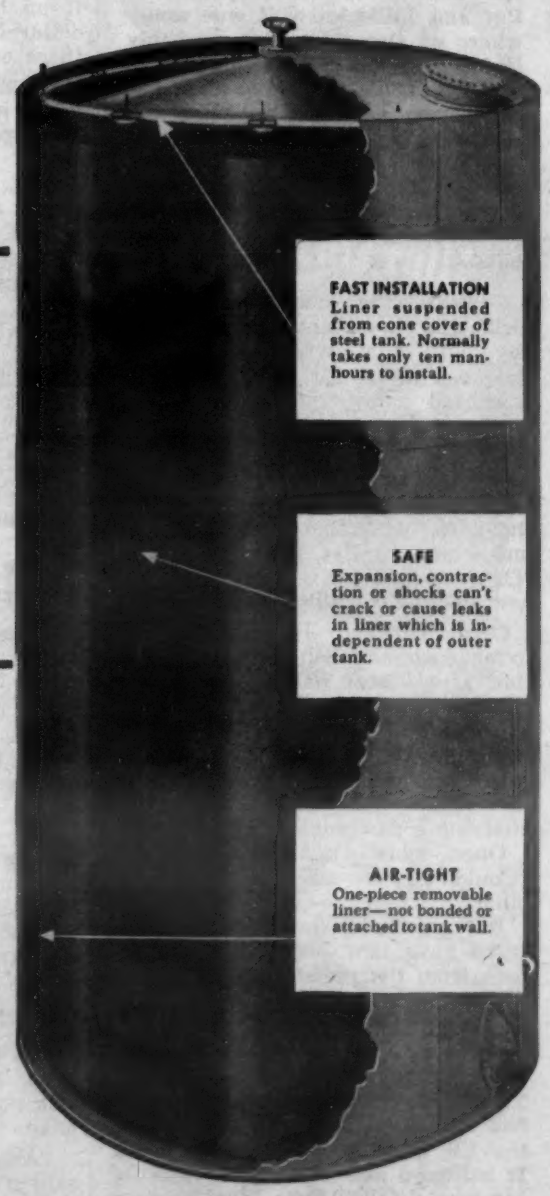
STANTON, TEXAS — One noticeable trend in this irrigated cotton area is toward less acres, more water and more fertilizer. Fertilizer has been used only about five years, but every year farmers are putting on more to the acre, according to Floyd Smith, manager of the Stanton Chemical Co.

"A lot of them get caught during the summer's drouth when the water isn't sufficient to keep cotton from burning. We've seen fields where dry weather and shortage of irrigation water have reduced the yield by 25% in just a few weeks time."

Cuts chemical storage costs up to 80%

of stainless steel tank costs, up to 40% of rubber-lined tank costs!

NEW Butler FXL *Flexi-Liner* Storage Unit


FAST INSTALLATION
Liner suspended from cone cover of steel tank. Normally takes only ten man-hours to install.
SAFE
Expansion, contraction or shocks can't crack or cause leaks in liner which is independent of outer tank.
AIR-TIGHT
One-piece removable liner—not bonded or attached to tank wall.

Here's a new concept in storage facilities for corrosive liquids that can save you hundreds, even thousands of dollars. It's actually two separate tanks in one — a steel tank for strength and durability, a flexible laminated plastic inner liner that resists the corrosive action of a wide variety of chemicals. This wall-plus-liner construction has been proved by three years of research and field testing. It's safe, air-tight — expansion, contraction or shocks to outer tank can never cause leaks or cracks because the liner is independent of the outer wall.

Butler, long a manufacturer of steel storage tanks, furnishes both the outer tank and the liner. Capacities from 8,000 to 17,000 gallons, delivery within 30 days of receipt of order.

Tested and proved for safe storage of:

Acids . . . Phosphoric Acid 75%, 50%, 10%, Sulphuric Acid 80%, Glacial Acetic, Chromic 40%, Hydrochloric 35%, 10%, Nitric 10%.

Alkalies . . . Ammonia Hydroxide Conc., Calcium Hydroxide, Sodium Hydroxide, Sodium Hydroxide 10%.

Salts . . . Ammonium Nitrate 40%, Ammonium Nitrate Sat., NH_3 (Nit. Sols.), Liquid Fertilizer Solutions, Sodium Chloride Sat. Sol., Sodium Carbonate Sat. Sol.

BUTLER STEEL PRODUCTS

Manufacturers of Steel Buildings • Oil Equipment
Farm Equipment • Dry Cleaners Equipment
Outdoor Advertising Equipment • Special Products
Factories at Kansas City, Mo. • Galesburg, Ill.
Richmond, Calif. • Birmingham, Ala. • Houston, Tex.
Burlington, Ont., Canada • Minneapolis, Minn.

MAIL COUPON FOR DETAILS

BUTLER MANUFACTURING COMPANY
7396 East 13th Street, Kansas City 26, Missouri
Attention: Mr. E. C. Wasson

Please send full details about low cost storage of chemicals with new Butler FXL Flexi-Liner storage units. We need _____ of storage for _____ (type of chemical) (gallons)

Name _____

Firm _____

Street _____

City _____ Zone ____ State _____

Doing Business With

Oscar & Pat

By AL P. NELSON
Croplife Special Writer

There were two times of the business day when Oscar Schoenfeld, the rotund, balding and cost watching partner in the Schoenfeld & McGillicuddy farm supply store, felt as supremely happy as any man of his type could feel. Those moments of happiness were usually at 10 a.m. and 2:30 p.m., the times when Oscar took the money to the bank. Most other business men took currency and cash to the bank once a day, but Oscar was not satisfied with such a procedure—it must go there twice.

And he would trust no one else with the job, either. After Tillie Mason, the plumpish bookkeeper and he would get the deposits ready, then Oscar would watch his chance and take the checks, etc., into the men's washroom.

No one ever knew where he put the money for safekeeping, but Pat and Tillie knew it was somewhere on Oscar's person, probably inside his shirt. And then, just to fool any would-be holdup man, Oscar always carried a wrapped and tied shoe box—it was always empty—under his arm when he went to the bank with a deposit. He figured that if he got held up, the robber would grab the empty shoebox.

Folks of the town, seeing Oscar walk downtown and back twice a day with that wrapped and tied shoe box under his arm, must have wondered many a time how someone as tight as Oscar would buy so many shoes.

One early fall morning just as Oscar was preparing to leave for the bank, with the empty shoe box under his arm, Pat, his partner, said, "Oscar, would you get me six crisp, new one dollar bills at the bank?"

Oscar frowned. It was like Pat to make some foolish request just like this, after Oscar had all the money ready for deposit, save $50 currency in the till.

"Is this for you or for the business?" he asked sharply.

"For the business!" Pat replied, studying a pamphlet on his desk.

Once more Oscar frowned. "Couldn't you use old one dollar bills?"

Pat shook his head. "Nope, I've gotta have new ones. Take six old ones from the register."

Irritably, Oscar went to the cash register and took six one dollar bills. Now there would only be $44 in cash until he got back from the bank. That bothered Oscar. For years, it had become a habit to leave $50 in the till when he went to the bank. It bothered him—that $44 total. Oscar was a fellow who liked to have things the same, day after day. That spelled security and progress to him. It showed a man was running his life right.

He was so upset about that $44 in the till that when he got to the bank and deposited the money, he almost forgot to get the new one dollar bills. He only remembered it because he saw a stack of new bills in the cashier's drawer.

"What's the matter, Oscar, isn't the old money good enough?" Bill Carlsen, the pudgy cashier asked. "I thought you were the kind of fellow who likes to make things last. These bills will still buy a lot of stuff."

"Ach," said Oscar, "they won't stay with us long. Money never does. That partner of mine."

Cashier Carlsen grinned. "Well, you fellows never get bored in your business anyway—you and Pat. You fight a lot but the bank balance keeps growing."

"Ja, thanks to me," Oscar said, putting the new bills in an envelope, and tucking them carefully into his inside coat pocket. "If I would not watch every penny, we would be bust a long time ago yet."

"Well," said Bill Carlsen, "you keep on watching and Pat should keep on selling. Then I won't worry about you fellows."

Back at the office, Oscar laid down the envelope with the new one dollar bills on Pat's desk.

Pat smiled. "Thanks, Oscar."

Then the Irishman pulled a large cardboard from behind the safe, laid it on his desk, took out the fresh dollar bills and began Scotch taping them on the sign.

Oscar watched in horror. "Ach, what in the world are you doing, Pat, pasting that money on the sign?"

"Oh, this will sell some more fertilizer for us, Oscar," said Pat. "At least I hope it will. It won't hurt to try."

"Himmel, but do you have to use dollar bills?" asked Oscar scandalized at this monetary heresy.

"I certainly do," Pat explained. "This sign, Oscar tells farmers that for every $1 they invest in fertilizer, they can expect to get in return up to $5. The sign wouldn't mean much unless I post a one dollar bill under the 'Cost of Fertilizer' and the five one dollar bills under 'Greater Crop Yield.' That will get the story across."

Oscar began to perspire. "Himmel, where are you going to put that sign? Not in the window?"

Pat nodded slowly. "Yes, for awhile at least. I want every farmer that comes this way to see it. I want them to see, in real dollar bills that fertilizer does not cost them anything in the long run. It returns more to the farmer than it costs him, up to five times, depending on crops, moisture, etc."

"But someone will break the window and take those six dollar bills," Oscar said anxiously. "Then our cash register will be six dollars short."

"So that is what is worrying you. Well, I don't think any one would risk going to jail for six dollars. We haven't got that kind of customers."

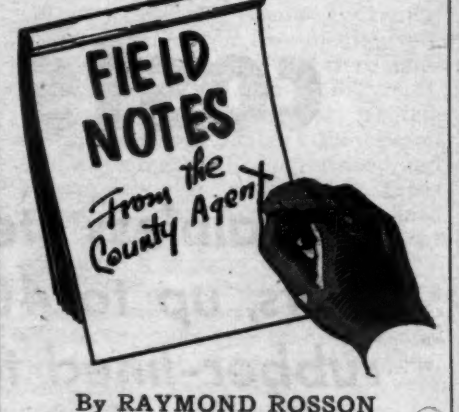
"Ach, you are too trusting," Oscar said irritably. "Farmers that owe us money for months at no interest, they would do anything, if they thought they could get away with it. I never heard of such foolishness—putting real money in a window display. I don't like it. It makes me nervous. And now we only have $44 in the cash register. We always had $50 every day for years, after the bank deposit goes in."

Pat grinned, then reached into his pocket and brought forth some crumpled bills. Slowly he counted out six soiled one dollar bills. "Oscar," he said, "how would this firm like to borrow six dollars from me until tomorrow, at no interest rate, to raise the balance in the cash register from $44 to $50?"

Oscar brightened visibly. "Ja, that will be better." He took the bills, put them in the cash register and breathed a sigh of relief. Then he turned to Pat, another frown on his face. "But at night, we will have to take that sign and lock it in the safe."

Pat nodded. "I thought of that before I had the sign made up. It will fit very nicely into the safe—at night. Daytimes, it will work for us out front, and make extra sales."

"Ja," thought Oscar critically. "We will see."



By RAYMOND ROSSON
County Agent, Washington County, Tenn.

Plants eat too. They come through the crust hungry, and it is the farmer's duty, to see that they are well fed. The boy has the world to furnish sustenance; the animal has the field, but the plant has only one spot, and if that one little spot hasn't "it", the plant is out of luck.

Plant food is the capital stock of the farmer, and when it is gone his business of farming is gone. Without plant food the grocery shelves would be empty.

Methods of treating the soil changed little from the time of the pharaohs in Egypt, to about 100 years ago. The first nitrate of soda was imported in 1830. In 1840 bones were treated with sulphuric acid, making the phosphate more available. In 1842 the first superphosphate was made, and in 1845 the value of potash salts was discovered, and the first fertilizer experiment was begun at state college, Pa. in 1872.

Plant food, plus toil, plus brains give a homestead its value . . . no crop can be grown at a profit where land is exhausted under a system that takes away the fertility and nothing is returned.

Nitrogen is absolutely essential for the growth and reproduction of both plants and animals, and all life would cease to exist without it.

Phosphorous has sometimes been called the master key to agriculture. Adequate amounts of available phosphorous in soils favor rapid plant growth and development, hastens maturity or fruiting and improves quality.

Potash insures the development of well-filled kernels and gives stiffness to the straw, and especially encourages the growth of legumes . . . it is a must for alfalfa and alfalfa is a must for hay.

Soils full of balanced plant food, mean groceries full of nutritious foods for people . . . and people eat too.

OVER THE COUNTER

(Continued from page 9)

chandising executive stresses the five rights of good merchandising: "Having the right merchandise at the right price in the right quantity at the right time in the right place."

A good inventory control system will help reduce the element of risk and will provide guidance in buying and selling requirements.

Traffic flow in a store is important, he said. "Make it easy for your customers to get around and see all your merchandise," he advises. "Provide aisles which are straight and sufficiently wide and clear to facilitate ease of movement."

As to interior layout, Mr. Berger points out that locating related lines and related departments in close proximity will encourage suggestive selling. Frequent rotation of merchandise display is desirable to bring new items to the attention of a dealer's customers.

Mr. Berger suggests that perhaps the trade associations and various manufacturers could help dealers with the proper store fixtures and also with the development of certain packaging, merchandising and selling techniques.

High Profits Poster

Many Georgia dealers are exhibiting a dramatic poster emphasizing that in Georgia "high corn profits come only from fertilized fields." Responsible for distributing the poster is the National Plant Food Institute and the University of Georgia extension service.

"The poster was distributed widely throughout the state through county agents and industry members to help supplement the excellent soil fertility information program being carried on by the Georgia extension service," reports Dr. Russell Coleman, executive vice president of the institute.

The colorful poster includes these statements: "Five hundred pounds 4-12-12 plus 70 lb. nitrogen for 60 bu. per acre with $51 profit per acre. For maximum profits—follow all recommended practices. See your county agent."

The Georgia poster is one example of how the fertilizer industry can further its educational campaign to promote the efficient and increased use of fertilizer.

Grower Reports Good Results with Thimet

HOUSTON — Stafford Rodden, a Harris County, Texas, farmer, reported good results this year from use of Thimet, a new systemic insecticide, on his cottonseed.

Mr. Rodden used 8 lb. of 44% Thimet to 50 lb. of seed. He planted April 18, and declared he could find no bug activity during the first 30 days after the cotton came up.

Dan Clinton, Harris County agent, checked the field July 4 and found insect infestation less than 1%. Thimet is produced by American Cyanamid Co.

DIVIDENDS DECLARED

NEW YORK—The board of directors of American Potash & Chemical Corp. has declared quarterly cash dividends of 25¢ a share on the class A and common stocks payable Dec. 15, 1956, to stockholders of record Dec. 1, 1956, and a stock dividend of 3% payable in common stock on Jan. 9, 1957, to Class A and common stockholders of record Dec. 1, 1956. The directors also declared the quarterly dividend of $1.00 a share on the $4.00 cumulative preferred stock, Series A.

...y Weather Helps ...otton Pickers, Hurts ...hers in Mid-South

MEMPHIS — Mechanical cotton ...kers are flashing their magical ...ers over the crop in the South as ... weather—for a change—helps the ...ton grower harvest his crop.

Extension agents in Mississippi, Ar...nsas and Tennessee report the ...kers are being used extensively ...s year on a crop cut as much as ...% by the extended dry weather and ... winds. The continuing dry weath... is helping the weather-harried ...owers gather their crop in good ...ndition.

But while the dry weather helped ... cotton growers, it was an ill wind ...others as it hampered the planting ... winter pastures and cover crops. ...ere were no serious outbreaks of ...rest fires, but J. S. Therrell, ex...nsion forester in Mississippi, posted ...warning to farmers to use extreme ...re when in dry grass and woods.

The Mid-South (the Tri-State ...rea of Arkansas, Mississippi and ...ennessee) was blessed with a mild ...ain Oct. 1 but it was by no means ...he "gully washer" needed to help ...lanting and crops in general.

Sweet potato digging is becoming ...neral in the area, with most of the ...op going into storage. Corn harvest...g is getting under way with yields ...nerally under last year.

Now is the time for all good men ... come to the aid of their cattle, ...dvises A. C. Bennett, Mississippi Ex...nsion entomologist, who advised re...ewing insecticide on homemade back ...bbers and spraying as control meas...res.

Arkansas officials are aroused by ...fusal of the administration to give ...drouth disaster relief" to eight ...outhwest Arkansas counties. Gov. ...rval Faubus first made the request ...wo weeks ago and renewed it last ...eek. He met refusal. Senator J. Wil...am Fulbright (D., Ark.) took up the ...udgels Oct. 1 but he, too, got no ...arly response.

In some parts of the state, the ...routh is so serious that small towns ...re looking wistfully to their larger ...eighbors for extra water. Benton, in ...aline County in the heart of the ...tate, is an example. Benton had a ...fish trap" reservoir that served its ...eeds until it burgeoned during the ...ar under the impetus of two 100 ...illion dollar aluminum plants. Then ... created a rather large lake reser...oir 17 miles from town and thought ... had it made. But now the extended ...ry weather has practically shoved ...he "fish trap" down to a dangerous...y low level and its lake is nine to ...0 feet down. It's hoping Little Rock, ...ith its billions of gallons in lakes ...00 miles from the capital, will give ... some help should it become neces...ary.

The Arkansas Agriculture Exten...sion Service reported late corn and ...sorghum crops are suffering badly ...from the dry weather. In many ...areas, winter grains are being ...planted by the "dusting in" process.

The Arkansas rice harvest, on the ...ther hand, was making excellent ...rogress under ideal weather condi...ons for that task and yields were ...eported as "very good."

Land preparation is at a virtual ...andstill in all 21 counties of West ...ennessee because dry weather is ...locking fall seeding and pasture ...ork. County agents say a good ...ground-soaking" rain would defi...tely improve the entire agriculture ...cture.

Cotton harvesting remains a bright ...ot. It's moving along at top speed ...d some counties are reporting good ...elds. Late cotton is opening rapidly ...d picking will continue to domi...ate the farm scene for the next few ...eeks.

Vulcan Executive Named To Government Post

BELLWOOD, ILL. — Vern I. McCarthy, Jr., vice president of Vulcan Containers Inc., Bellwood, Ill., manufacturers of steel shipping containers and tin cans, has been named to serve a six months appointment as deputy director of the containers and packaging division of the Business and Defense Services Administration, in the Department of Commerce, it was announced in Washington by BDSA administrator Charles F. Honeywell.

In this post, Mr. McCarthy will represent the entire American packaging and container industry, including manufacturers of glass, wood, fiber, paperboard, textiles, as well as steel, plastic, aluminum foil, and tin plate containers. One of 25 industry-wide representatives of American business and industry serving with the Commerce Department on a "loan" basis, he will be responsible for reflecting the over-all activities of the container industry with the federal government.

After his six months assignment, Mr. McCarthy will be available to the government as a trained industrial reservist.

An authority on steel shipping containers used for a broad selection of packaging purposes including chemicals, food, and petroleum products, Mr. McCarthy at 29 is believed to be the youngest business executive ever to hold the post in the BDSA.

Educated at Missouri Valley College, Marshall, Mo., and Northwestern University, Chicago, Mr. McCarthy has been active in the research and product development activities of the steel pail and tin can divisions of his company.

SHORT APPLE CROP

BURLINGTON, VT.—The apple harvest started in Vermont in October, but the crop is smaller than a year ago, according to C. L. Calahan, fruit specialist of the Vermont Extension Service.

Western Development Conference Scheduled

PHOENIX, ARIZ.—Program plans have been announced for the fourth Western Area Development Conference to be held Oct. 31 and Nov. 1 in Phoenix.

The conference, which will be held at the Hotel Westward Ho, is co-sponsored by Stanford Research Institute and the Confederacion de Cameras Industriales de los Estados Unidos Mexicanos (Confederation of Mexican Industrial Chambers).

Opening remarks on Oct. 31 will be delivered by the general chairman of the conference, D. E. Noble, vice president, Motorola, Inc.

The two-day program will include panels on water supplies and land uses, with speakers from both Mexico and the U.S.

Executive secretary of the conference is Carleton Green, manager of the Mountain States office of Stanford Research Institute, Phoenix.

Watch For These 3 Hard-Selling Phillips 66 Ads...

TO HELP YOU GET MORE FALL BUSINESS!

Good pasture management calls for balanced fertilization—including phosphate, potash and other minerals, in addition to nitrogen.

S-T-R-E-T-C-H GREEN FEED

Apply Phillips 66 Ammonium Nitrate on pastures this fall for increased beef and milk gains at lower cost:

Good pasture management calls for balanced fertilization—including phosphate, potash and other minerals, in addition to nitrogen.

"BONUS" GRAZING

How fall application of Phillips 66 Ammonium Nitrate can stretch small grain pasture for extra profit:

Bank Nitrogen This Fall!

Get crop dividends next year—plow down Phillips 66 Ammonium Nitrate this fall:

AUG. SEPT. OCT.

PHILLIPS 66 AMMONIUM NITRATE

PRILLED AMMONIUM NITRATE FERTILIZER

NITROGEN 33.5%

PHILLIPS 66 FALL ADVERTISING WILL REACH 4,625,000 FARM READERS

Fall business is plus business—and Phillips *66* is out to help you get more of this end-of-the-year profit. Convincing ads like these demonstrate to your best prospects that they can profit by fall application of fertilizer.

Look for the message in these ads that sells balanced fertilization—and mixed fertilizers. Another Phillips *66* extra to make your selling job more profitable.

A companion high nitrogen fertilizer for your quality mixed goods.

PHILLIPS CHEMICAL COMPANY

A Subsidiary of Phillips Petroleum Company, Bartlesville, Oklahoma

Offices In:

AMARILLO, TEX.—*First Nat'l Bank Bldg.*
ATLANTA, GA.—*1428 West Peachtree Street*
BARTLESVILLE, OKLA.—*Adams Bldg.*
CHICAGO, ILL.—*7 South Dearborn St.*
DENVER, COLO.—*1375 Kearney Ave.*
DES MOINES, IOWA—*6th Floor, Hubbell Bldg.*
HOUSTON, TEX.—*1020 E. Holcombe Blvd.*
INDIANAPOLIS, IND.—*1112 N. Pennsylvania St.*
KANSAS CITY, MO.—*500 West 39th St.*
MINNEAPOLIS, MINN.—*212 Sixth St. South*
NEW YORK, N. Y.—*80 Broadway*
OMAHA, NEB.—*6th Floor, WOW Building*
PASADENA, CALIF.—*330 Security Bldg.*
RALEIGH, N. C.—*804 St. Mary's St.*
SALT LAKE CITY, UTAH—*68 South Main*
SPOKANE, WASH.—*521 E. Sprague*
ST. LOUIS, MO.—*4251 Lindell Blvd.*
TAMPA, FLA.—*3737 Neptune St.*
TULSA, OKLA.—*1708 Utica Square*
WICHITA, KAN.—*501 KFH Building*

AT TEXAS WATER CONFERENCE—Sherman W. Clark, Texas Gulf Sulphur Co., Houston, Texas, and T. C. Richardson of "Farmer-Stockman" magazine, look at a pictorial representation of the water cycle in Texas. The drawing was one of several exhibits shown during the recent water for Texas conference held at Texas A&M College. Over 100 persons from Texas and neighboring states were in attendance.

Stockholders Approve Merger of West End and Stauffer Chemical Co.

NEW YORK—The merger of West End Chemical Co. into Stauffer Chemical Co. was approved Sept. 25 by the stockholders of both companies at special meetings.

Of the 3,076,705 shares of Stauffer common stock outstanding, 2,737,587 shares or 89% were voted in favor of the merger 1,904 shares or .06% were voted against.

Of the 2,012,197 shares of West End common stock outstanding, 1,709,751 shares or 85% were voted in favor of the merger and 8,746 shares or .4% were voted against. Of the 1,609,341 shares of West End participating preferred stock outstanding, 1,314,915 shares or 82% were voted in favor of the merger and 8,914 shares, or .5% were voted against.

The merger became effective on Oct. 1, 1956.

Bruce L. Haddock

Diamond Names Bruce L. Haddock To New Position

CLEVELAND, OHIO — Diamo Black Leaf Co. has announced t appointment of Bruce L. Haddock the newly-created position of assi ant merchandising manager. Geor V. Dupont, general manager, ma the announcement.

Mr. Haddock's duties are to ass Clark M. Munger, merchandisi manager, in the company's distrib tor-dealer program covering Bla Leaf brand home-gardening chem cals.

A graduate of Syracuse Universi Syracuse, N.Y., Mr. Haddock also tended Worcester Academy, Wo cester, Mass., and for the past thr years has been in military servi with the U.S. Army. In college, t new appointee studied journalism, a vertising and marketing and is member of several professional frat nities in these fields. A native Cleveland, he and his wife reside Shaker Heights, Ohio.

Science Center Opens in Baltimore

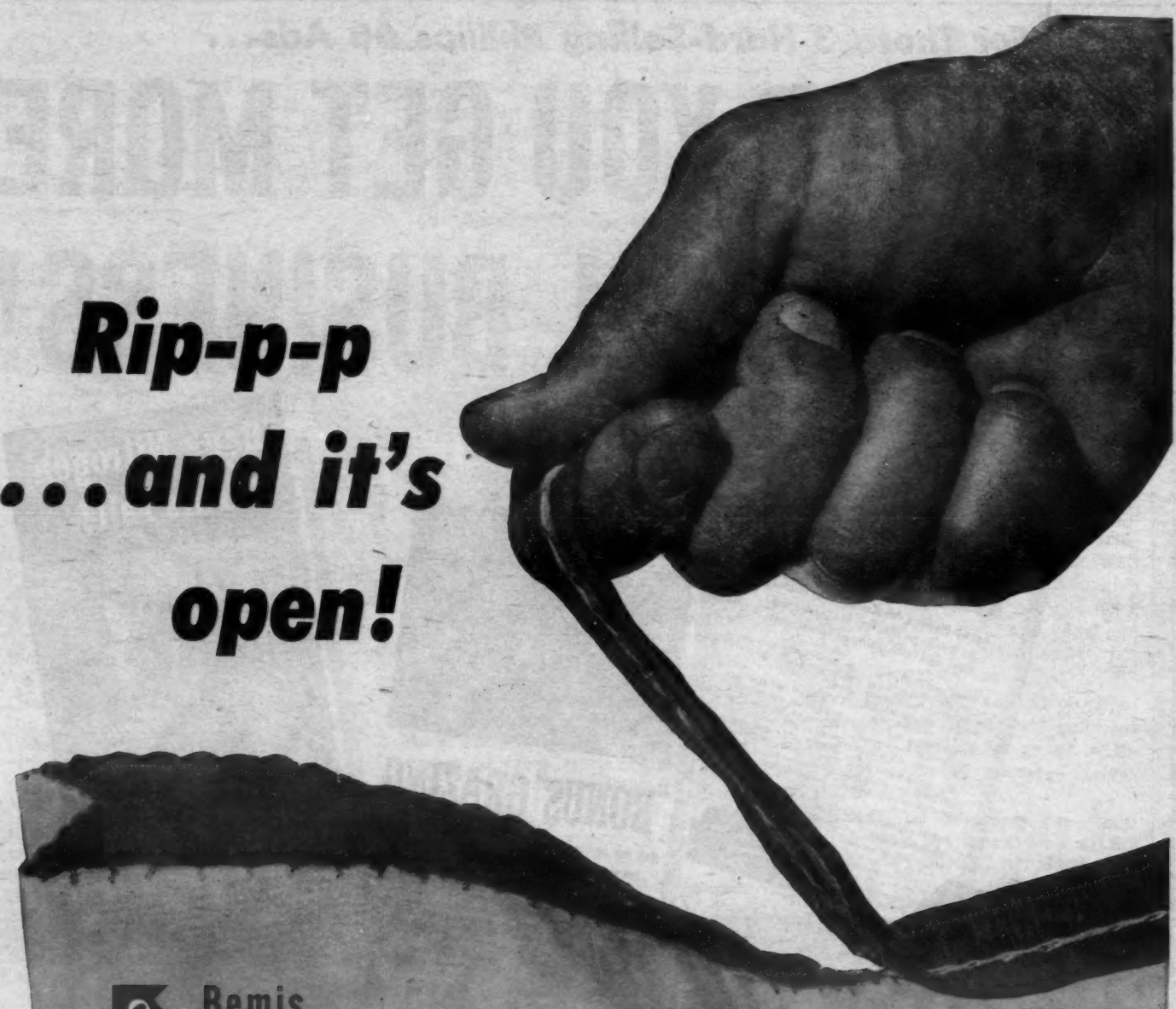
BALTIMORE—The opening of S ence Center in a newly construct building on North Rolling Road he has been announced by Dr. Euge J. Berberg, president of the ventu

The center houses under one ro related companies which cover a wi field of scientific activities. Inse Control and Research, Inc., Corn Chemical and Equipment Co. Inc. a American Bio-Chemical Laborato Inc. will share separate but adjace facilities. These include library a reference rooms, offices, conferen rooms, varied laboratory and testi areas, warehouse and service fac ties.

Insect Control and Research, I with its staff of entomologists, bio gists and sanitarians now services t field of industrial sanitation. In ad tion, there are household pest contr termite control and weed control di sions. ICR maintains entomologi testing facilities.

Cornell Chemical and Equipme Co., Inc., distributes a complete li of agricultural chemicals and pes cides and all types of applicat equipment.

The American Bio-Chemical La ratory, Inc. provides research, dev opment and testing facilities in fields of sanitation, food and f packaging, paper and paperboard c verting, specialized corrosion test and plastic coating and lubricat problems.


Rip-p-p
...and it's
open!
Bemis
RIPP-NIPP*
Bag
Grasp tape here
TO OPEN
Pull up Sharply!
Give your customers the time- and labor-saving benefits of Bemis RIPP-NIPP* in Bemis Multiwall Bags. They'll thank you for it...and RIPP-NIPP costs you nothing extra.
Get the details from your Bemis Man.
RIPP-NIPP—A small, closely controlled, machine-made nip cut in the bag at the edge near the sewn seam to start easy tear along the top. Does not weaken the bag.
*Trade-mark
BEMIS
Bemis
General Offices — St. Louis 2, Mo.
Sales Offices in Principal Cities

MEETING MEMOS

ct. 8-10 — Carolinas-Virginia Pesticide Formulators Assn., Inc., Annual Meeting, Holly Inn, Pinehurst, N.C., W. R. Peele, 516 S. Salisbury St., Raleigh, Secretary-Treasurer.

ct. 9—Western Agricultural Chemicals Assn., Fall Meeting, Villa Hotel, San Mateo, Cal., C. O. Barnard, 2466 Kenwood Ave., San Jose, 28, Cal., Executive Secretary.

ct. 15 — Fifth Annual Chemical Sales Clinic, the Salesmen's Association of the American Chemical Industry; Hotel Commodore, New York City; chairman, Preston F. Tinsley, Westvaco Chlor-Alkali Division, Food Machinery and Chemical Corp., 161 East 42nd St., New York 17, N.Y.

ct. 16-17—National Nitrogen Solutions Assn., Annual Meeting and Trade Show, City Auditorium, Sioux City, Iowa; John White, Auburn, Neb., secretary.

ct. 16-18—Fertilizer Industry Round Table, Shoreham Hotel, Washington, D.C. Vincent Sauchelli, Chief Agronomist, Davison Chemical Co., Div. W. R. Grace Co., Baltimore 3, Md., chairman.

ct. 16-18—Canadian Agricultural Chemicals Assn., Fourth Annual Meeting and Conference, Sheraton-Brock Hotel, Niagara Falls, Ontario.

ct. 18-19—Association of American Fertilizer Control Officials, Shoreham Hotel, Washington, D.C., B. D. Cloaninger, Clemson Agricultural College, Clemson, S.C., secretary-treasurer.

ct. 22-23—Fertilizer Section, National Safety Council, La Salle Hotel, Chicago, Ill.; Curtis A. Cox, Virginia-Carolina Chemical Corp., Richmond, Va., chairman.

ct. 23-24—Pacific Northwest Garden Supply Trade Show, Shrine Auditorium, Portland, Ore.

ct. 25—Middle West Soil Improvement Committee, Annual Meeting, Sherman Hotel, Chicago; Z. H. Beers, Executive Secretary, 228 N. La Salle St., Chicago 1, Ill.

ov. 2—Southern Soil Fertility Conference, Atlanta-Biltmore Hotel, Atlanta, Ga.

ov. 7-9—Agricultural Ammonia Institute, Annual Convention, Atlanta Biltmore Hotel, Atlanta, Ga., Jack F. Criswell, Claridge Hotel, Memphis, executive vice president.

ov. 7-9 — Pacific Northwest Plant Food Assn., Annual Convention, Harrison Hot Springs Hotel, Harrison Hot Springs, British Columbia, Leon S. Jackson, Lewis Bldg., Portland, Ore., secretary.

ov. 11-13 — California Fertilizer Assn., 33rd annual convention, Del Coronado Hotel, Coronado, Cal.; Sidney H. Bierly, executive secretary, 475 Huntington Drive, San Marino 9, Cal.

ov. 13-15—18th Annual New York State Insecticide and Fungicide Conference and 9th Annual Pesticide Application Equipment Conference, Bibbins Hall, Cornell University, Ithaca, N.Y.

ov. 19-20 — Eastern Branch, Entomological Society of America, Hotel Haddon Hall, Atlantic City, N.J., B. F. Driggers, Rutgers University, New Brunswick, N.J., secretary.

ov. 19-20—Ohio Pesticide Institute winter meeting, Neal House, Columbus, Ohio.

ov. 27-28—Indiana Fertilizer Conference, Memorial Union, Purdue University, Lafayette, Ind.

ov. 28—Oklahoma Fertilizer Dealers Conference, Sponsored by the Oklahoma Plant Food Educational Society, Oklahoma A&M College, Stillwater.

Nov. 29—Oklahoma Soils and Crops Conference, Oklahoma A&M College, Stillwater.

Dec. 6-7—Alabama Soil Fertility Society, Whitley Hotel, Montgomery, Ala.

Dec. 10-12—13th Annual North Central Weed Control Conference, Sherman Hotel, Chicago.

Dec. 13-14—Soil Fertility and Plant Nutrition Short Course, University of Missouri, Columbia, Mo.

Dec. 13-14—Cotton Production Conference, The Titwiler, Birmingham, Ala.

Dec. 27-31—Entomological Society of America, Annual Meeting, Hotel New Yorker, New York City.

1957

Jan. 23-25 — Southern Weed Conference, Bon Aire Hotel, Augusta, Ga.; Walter K. Porter, Jr., Agricultural Experiment Station, Louisiana State University, Baton Rouge, secretary.

Jan. 28-29—National Cotton Council of America, Annual Meeting, St. Louis, Mo.

Jan. 31-Feb. 1-2 — Agricultural Aircraft Assn., Annual Convention, Senator Hotel, Sacramento, Cal., Wanda Branstetter, Route 3, Box 1077, Sacramento, Executive Secretary.

Feb. 4-6—Cotton States Branch, Entomological Society of America, Birmingham, Ala. W. G. Eden, secretary-treasurer, Alabama Polytechnic Institute, Auburn, Ala.

June 26-28 — Eighth Annual Fertilizer Conference of the Pacific Northwest, Benson Hotel, Portland, Ore. B. R. Bertramson, Washington State College, Pullman, Wash., chairman.

July 17-19—Southwestern Fertilizer Conference and Grade Hearing, Galvaz Hotel, Galveston, Texas.

Seek Pathologist

COLUMBIA, S.C. — Legislation to provide for a plant pathologist in the Clemson Extension Service will be sought by the Garden Club of South Carolina and other organizations. The pathologist would study diseases of flowering shrubs and evergreens, with emphasis on camellia blight. An appropriation of $15,000, turned down before by the state legislature, will be sought once again. Cooperating organizations are the South Carolina Camellia Society, South Carolina Nurserymen's Assn., the Hemerocallis Society of South Carolina and the South Carolina Rose Society.

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WASHINGTON WIRE

(Continued from page 1)

means of maintaining farm income . . . the attention of farmers, farm leaders and the related industries needs to be focused upon the job of building real markets instead of price fixing and production control . . . the U.S. is most fortunate in having the most productive, the most efficient and most dynamic agriculture in the world. Our primary object must be to preserve them . . . if we are to do this we must eventually terminate a quarter of a century of futile and damaging price fixing for major farm products. We must reverse the trend toward the external and internal dumping of farm products . . . The price-fixing production quota road in agriculture, including the Soil Bank, leads progressively toward the governmentalization of agriculture in our most productive farming areas and to the rationing of poverty in the disadvantaged farming areas."

The words from Mr. Tapp should be considered in contrast with the ideas of some advocates of a world food bank and other devices which seem likely to result in precisely the conditions which Mr. Tapp fears.

Not too far removed in his observations but taking a somewhat different avenue of approach were the statements of Dr. Schultz. The kernel of Dr. Schultz' speech was to emphasize the need of the adjustment of the farm labor force—hired labor as well as family labor and entrepreneurs in the farm economy. In effect, Dr. Schultz said that the farm community has to be cut back to tailor the production—the cost per unit per acre—to something comparable to what has been done in industry. In this connection, he did not take into consideration more than a million farm units which operate on a level little short of poverty.

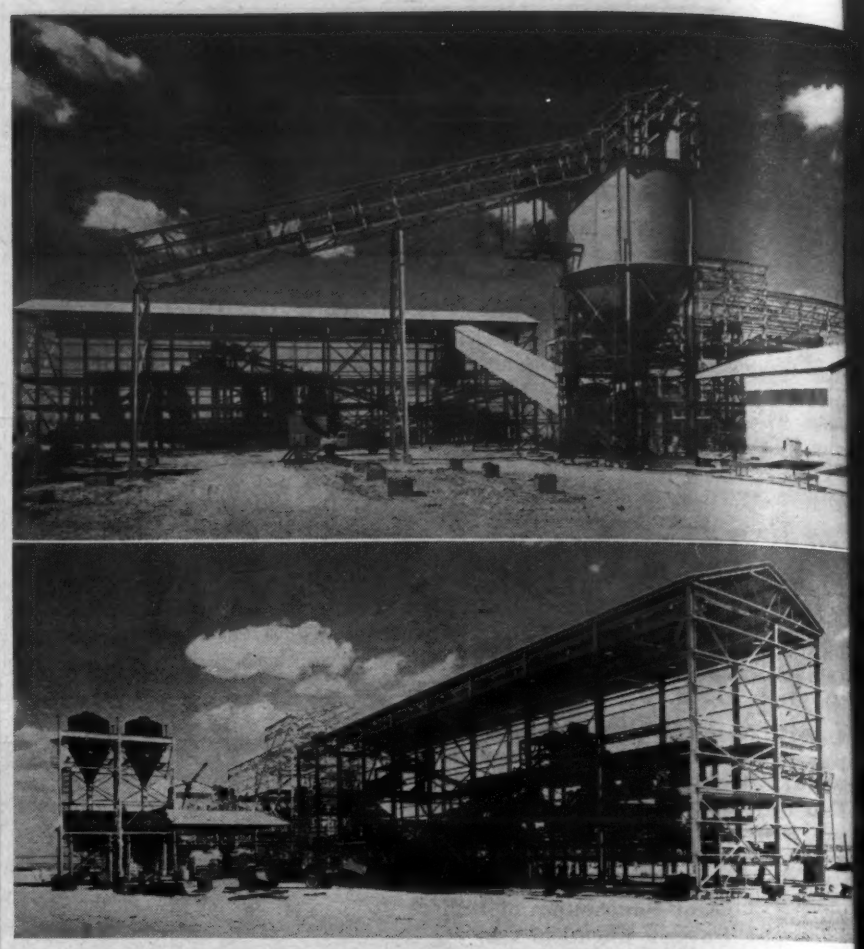
Dr. Paarlberg, the top representative of the USDA, speaking abstractly however in his professional capacity as an economist, tilted at the familiar theme of the "perverse response of supply to price." He placed into his theme a significant roll call of hierarchy of the farm economic spokesmen showing their lack of agreement. Perverse response of supply to price means that farmers do not clearly raise more or less agricultural products when prices decline.

Dr. Paarlberg said: "If prices are supported continuously and substantially above equilibrium levels, controls are unlikely to hold production in check and a surplus will develop."

Dr. Mehren raised tantalizing questions about the Paarlberg theory of perverse response of supply to price and other conditions which Dr. Paarlburg raised as to the complexity of the farm problem.

NEW AGRONOMIST

TUCSON, ARIZ.—The appointment of George W. Clark of Corvallis, Ore., as extension agronomist for the University of Arizona has been announced.



NATIONAL POTASH PROJECT—Construction work is proceeding on schedule at the new National Potash Co. mine near Carlsbad, N.M. The top photo above shows a 400-ton ore surge bin in the refining area. At the left is the crushing and screening building and at the right is the refining section. In the lower photo the crushing and screening building is shown as it takes shape. Its daily ore capacity will be 4,800 tons. Two vacuum crystallizers are at the left. See story on page 1.

AT SAN FRANCISCO MEETING—The National Association of Commissioners, Secretaries and Directors of Agriculture met in San Francisco recently and discussed many aspects of pest control and residues. A luncheon for the group was sponsored by five associations in the field. Their representatives are shown in photo at left: (sitting) C. O. Barnard, Western Agricultural Chemicals Assn.; and K. H. Inman, Interstate Manufacturers Assn. (Standing): L. E. Fickett of Interstate; R. W. Thomas, National Pest Control Assn.; Pete Clapp, Chemical Specialties Manufacturers Assn.; and A. F. Kirkpatrick, National Agricultural Chemicals Assn. At the right are members of the public relations panel. Left to right, they are: Bill Adams, Farm Bureau Federation, moderator; Louis H. Wilson, director of information, National Plant Food Institute, Washington, D.C.; and Jack Pickett, editor of the "California Farmer." A story of the meeting appeared on page 1 of the Oct. 1 issue of Croplife.

LABORATORY DEDICATED—Above is shown the newly-equipped Illinois feed and fertilizer laboratory at the Illinois State Fairgrounds, which was dedicated Oct. 3. Stillman J. Stannard, director of the Illinois Department of Agriculture, said the rehabilitated laboratory is equipped to analyze 10,000 samples annually as compared to 3,000 previously.

NEW COURSE

URBANA, ILL.—A new undergraduate curriculum in the college of agriculture leading to the degree of bachelor of science in horticultural food crops is being offered by the University of Illinois starting this fall. Courses in the program deal mainly with vegetables and fruits. One option under the four-year course of study emphasizes crop production while another option puts more emphasis on quality control in the manufacture of horticultural food products.

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SOIL BANK

(Continued from page 1)

That information gives credence to report that there is now in pros- more than 4 million acres of nter wheat land in the soil bank reage reserve program for wheat this time—even without consider- the delay in reporting from the nty level the much larger sign- for the wheat acreage reserve gram which is probably certain.

Last week, Croplife commented the wheat production outlook the Pacific Northwest where ere is no true control over cross mpliance in that wheat produc- g area.

Now it appears that in the soft wheat states—particularly New rk State and Michigan, there is a drive on by congressmen to en- ge the opportunities of the local eat farmers to get into the soil nk for their entire farms.

It is expected that USDA will look h some politically-inspired favor such proposals at this time.

All of these maneuverings on e part of the wheat farmer and SDA make up a sales equation r the plant food industry.

It is now seen that many wheat rmers in the soft red wheat belt y put all or almost all of their eat land into the wheat acreage serve program of the soil bank this ar if USDA will relax its current rticipation standards.

The condition indicates little less n a selective market for plant d ingredients this fall and next ar.

However, the latest reports of thdrawal of land from winter eat cultivation do not confirm USDA goal of between 12-15 llion acres entering the soil bank the total wheat crop. But—and s is an important "but"—USDA y ultimately decide after the final turns are in that wheat farmers l not be held to fifty acres or 50% their wheat land for wheat soil nk acreage participation and let em go all out where drouth con- ions may influence their farm ligment.

The sad note on this outlook is hat the soil bank is or may be- ome a composite of crop insur- nce or acreage allotments in an- ther form. This possibility is not sound outlook for the plant food ndustry but this report only con- erns itself with the nearby pos- ibilities.

As news stands at this time, the les potential of the plant food in- stry is obscure—uncertain at best. is said in official circles that the dustry must wait until the final turns are in and adjustments made soft wheat belt applications for rger acreage allotments in the heat acreage reserve soil bank.

On examination, it now seems cer- tain that the Russell Coleman idea of a higher application of plant foods in the wheat belt must be indicated so that the remaining land in wheat production in that and other areas can show higher yields per acre. They could thereby show a lower cost per bushel and even on farms under the soil bank program, the return to the farmer will be more satisfactory.

NEW PLANT FOR DIAMOND

CLEVELAND, OHIO — Diamond Alkali Co., producer of both inorganic and organic chemicals for industry and agriculture, has announced plans for a multi-million-dollar facility for manufacturing acetylene. The proposed plant will be located at Diamond's Deer Park plant at Houston, Texas.

ACREAGE RESERVE PAYMENTS

WASHINGTON — Payments to rmers participating in the 1956 reage reserve program of the soil nk totaled $3,484,906.64 in the 29 tes for which reports were avail- le through Sept. 21, 1956, the U.S. partment of Agriculture has an- unced. This first report on pay- nts (negotiable certificates) issued der the 1956 acreage reserve pro- am is incomplete, department of- ials explained, but it is the only ficial report received on disburse- nts so far. It is being made public cause of a number of inquiries con- rning conflicting reports of pay- nts made to date under the ogram.

Garden Supply Super Market Opens in Little Rock

LITTLE ROCK—Something new in the way of garden shops opened here in late September. It put merchandising of garden, lawn and pet supplies on a supermarket scale.

The Green Thumb Garden Center employs maximum display and gives the customer a chance to shop leisurely and make his own selection, just as he would shop at a modern food store.

The center, an addition to the extensive Adkins-Phelps Seed Co., is more than a garden supermarket. The plant, housed in three separate buildings and a large semi-shaded area, also includes a greenhouse and office, an open warehouse for the sale of feed and a theater and clubhouse for the use of garden clubs.

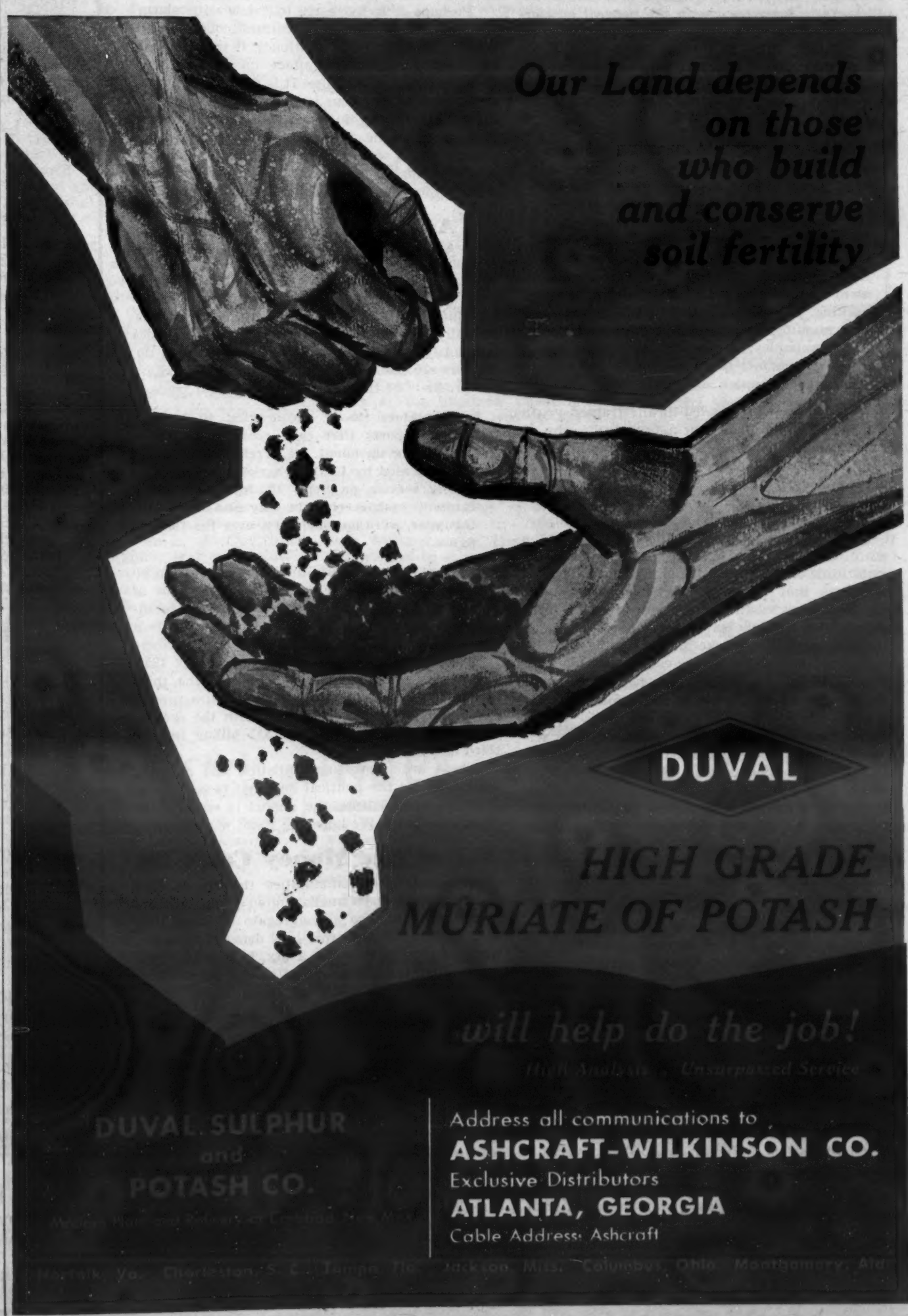
The theater and clubhouse are free services of the company. Garden clubs and related organizations are invited to use the facilities for their meetings and special activities. The company will maintain a film library on a wide variety of garden subjects. The clubhouse is equipped with a complete electric kitchen for organizations that want to serve refreshments.

David M. Phelps, president and general manager of the company, said the center would sponsor two shrub and garden clinics each year for the benefit of the area's gardeners.

Representatives of large chemical and garden supply companies will form the "faculties" for these clinics.

COTTON STATES ESA

BIRMINGHAM—The 1957 meeting of the Cotton States Branch of the Entomological Society of America will be held Feb. 4-6 here, according to an announcement by W. G. Eden, Alabama Polytechnic Institute, secretary-treasurer.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A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Southern states.

Ag College Enrollment Below Other Schools. Why?

The new school term just getting under way brings up a fact distressing to many in the agricultural field. Enrollments in schools of agriculture over the nation have not increased as much as in other schools. Why is this? Do both youths and adults lack an awareness of the expanded opportunities to be found in agriculture?

One of the many educational leaders who note with regret the failure of agricultural college enrollments to keep pace with the general accelerated rate of college entrants, is Arthur D. Weber, dean of agriculture at Kansas State College. He figures that apparently few persons realize that opportunities for those trained in agriculture increase at a rate in keeping with the increasing population of the country.

"Though farm populations are gradually declining, the demand for food is increasing," Dean Weber declares. "With the increased demand for food has come expanding opportunities for agriculturally-trained youth—both men and women—with industries that process or distribute food or serve farmers directly. These include farm equipment manufacturers and distributors; meat packing, processing, and distributing firms; feed manufacturers and distributors; fertilizer companies; banks, milling companies, grain companies; food processing and distributing companies, and many others."

All of them want agriculturally-trained youth with farm backgrounds. But many youths who do not anticipate being able to return to a farm, Dean Weber feels, do not know of these opportunities in agriculture.

The vast majority of youth who like the outdoors, animals, crops, and nature do not realize that, though fewer farmers will be needed in the future, training in agriculture prepares them for a multitude of jobs related to agriculture. The old stereotype that agriculture schools prepare one only to farm is as far from accurate as the 15th century idea that the earth was flat. Students in schools of agriculture take highly flexible training that prepares them for widely varying occupations.

Also overlooked, Dean Weber feels, is the fact that a world at war or peace, in prosperity or depression, always will provide unvarying, steady demands for those trained in the agricultural sciences. "Many farm and small town youths do not realize that the demand for school of agriculture graduates parallels demands for graduates of all college curriculums, with a few periodic exceptions," he says. "Scientific changes in agriculture have created many opportunities in industries allied with agriculture for youth from farms and small towns. Training in schools of agriculture prepares them for these opportunities."

Dean Weber sees a crisis developing in agriculture for lack of trained agricultural scientists to go with scientific agriculture. Agricultural sciences, expected to produce food and fiber for rapidly expanding and better-fed U.S. population and possibly to contribute toward world peace by feeding part of the hungry in the world, already is seriously short of highly-trained scientists.

Needed with a high degree of technical training are agronomists, geneticists, animal breeders, plant breeders, cereal chemists, entomologists, plant pathologists, botanists, and others. Agriculture needs scientists as highly trained as any other industry. Colleges now are bidding against each other and industry for young staff members with specialized training in the above fields. Any capable youth who cares to qualify with advanced training will have a multitude of such employment opportunities.

Often overlooked too, is the fact that training in schools of agriculture is strongly flavored with the other sciences and the arts. Most, if not all agricultural colleges stress that part of the Land-Grant Act which says that agricultural colleges will "not exclude other scientific and classical studies" but will "promote the liberal and practical education . . . in the several pursuits and professions in life." Those studying agriculture at such colleges are exposed to the humanities, cultures, history, government, music, art, literature and languages . . . a splendid preparation for responsible leaders in a democratic society.

Perhaps it is too early to "view with alarm" the situation as regards agricultural college enrollment, but if the trend continues, it will certainly have its straightening effect on the chemical trades serving agriculture. It is an eventuality we don't want to see occur in the industry, and probably the best way to avoid shortages of trained manpower in the future, is to encourage more youngsters to seek careers in agriculture and its related fields. It is a good bet for the students and also for the welfare of the industry.

As Farm Income Rises So Do Sales Prospects

It is difficult these days to talk about farm income getting better or worse, without everyone attaching political significance to such remarks. Actually, our interest in this phase of economics lies solely in the fact that when income is up, farmers are likely to be more inclined to purchase the products of the agricultural chemical trade.

Therefore, it is encouraging to note USDA reports that cash receipts of the farmer are up about 4%. Preliminary figures released by USDA's agricultural marketing service on Sept. 17, indicate that farmers' cash receipts in July and August this year, were up almost 4% over the 1955 figure.

Both prices and marketings are reported to be slightly higher than in the same two months of 1955, it reports. Although operating costs are admittedly running slightly higher than they were a year ago, it now appears likely that farmers realized a net income in the third quarter of 1956, which was appreciably higher than in the third quarter of 1955. In fact, it might reach a rate of $12 billion or higher, compared with the seasonably adjusted annual rate of $11 billion for the third quarter of 1955.

These are interesting statistics, and allowing somewhat for the political hay that is sure to be made of such figures, the import is encouraging to say the least. We hope the trend will continue.

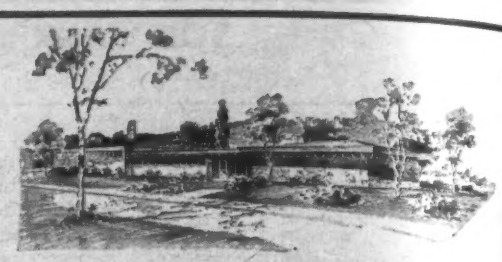
What Tax Money Can't Do

In some 2,000 communities throughout the United States and Canada united campaigns are in progress to raise an aggregate of more than $340 million. Though this is a demand upon the national income, it is not a tax. It is called upon to do what tax money either cannot do at all or can do only up to a certain point, beyond which it is the voluntary social agency, supported and operated by and for the community, that must meet the need.

No individual, no family, no community is immune to trouble. A child is stricken by a crippling illness, a heart fails, a cancer cell plays havoc with a once healthy body. A storm or a flood disrupts an entire city. Old people grow lonely, boys and girls become restless.

The new industry, new highway or housing development that means progress for a community can also mean trouble if dislocations or increased population are not accompanied by adequate health and welfare services.

Making certain that adequate health and welfare services are available in time of need is everybody's business.



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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is $5 for one year ($8 a year outside the U.S.). Single copy price, 25¢.

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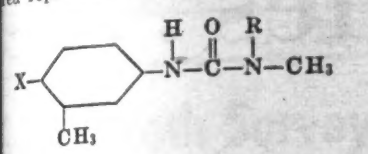
Industry Patents and Trademarks

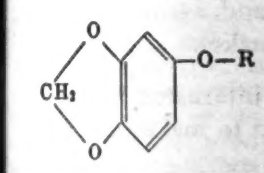
2,764,478. Weed Control Composition and Method. Patent issued September 25, 1956, to Norman E. Searle, Wilmington, Del., assignor to E. I. Du Pont De Nemours & Co., Wilmington, Del. A herbicidal composition comprising a pest control adjuvant and, in a concentration sufficient to exert herbicidal action, a tri-substituted urea represented by the formula:



where X is halogen and R is an aliphatic hydrocarbon radical of 1 to 4 carbon atoms and is attached to the ureido nitrogen through a saturated carbon atom.

2,764,479. Herbicides. Patent issued Sept. 25, 1956, to Everett E. Gilbert, Morris County, N.J., assignor to Allied Chemical & Dye Corp., New York. A herbicidal composition comprising a member of the group consisting of hexachloroacetone, pentachloroacetone and mixtures thereof in a hydrocarbon oil as dispersion medium, said member being present in phytotoxic concentration.

2,764,517. 3,4-Methylenedioxyphenyl Ethers as Synergists for Pyrethrins. Patent issued Sept. 25, 1956, to Morton Beroza, Greenbelt, Md., dedicated to the public. A 3,4-Methylenedioxyphenyl ether of the formula



in which R is a radical selected from the group consisting of alkoxyethoxyethyl and alkoxyethyl wherein the alkoxy group contains 2 to 4 carbon atoms and chloroethoxyethyl.

2,763,579. Process for Impregnating Wood with an Insecticide and the Resultant Product. Patent issued Sept. 18, 1956, to Wilhelm Schulenburg, Frankfurt am Main, Germany, assignor to Deutsche Gold-und Silberscheideanstelt vormals Roessler, Frankfurt am Main, Germany. A process for rendering wood more resistant to attack by insects and fungi which comprises impregnating wood with a solution of an incompletely condensed resin obtained by condensation of at least one aldehyde selected from the group consisting of formaldehyde, paraformaldehyde and acrolein with a condensible nitrogen containing compound selected from the group consisting of urea, thiourea, guanidine, dicyandiamide and melamine and with a solution of thiocyanate of zinc.

2,763,588. Fungicidal Compositions of N-Phenyl Mononitrophthalamic Acids and Derivatives Thereof and Method of Applying to Plants. Patent issued Sept. 18, 1956, to George E. O'Brien, Bethany, Allen E. Smith, Oxford, and Adelaide Bornmann, New Haven, Conn., assignors to U.S. Rubber Co., New York. A fungicidal composition comprising a compound selected from the group consisting of N-phenyl-mononitrophthalamic acids and N-monosubstituted-phenyl-mononitrophthalamic acids in which the substituent in the phenyl group attached to the nitrogen is selected from the group consisting of chloro, bromo, nitro and hydroxy radicals and alkyl radicals having 1 to 5 carbon atoms, the nitrophthalamic group being unsubstituted except by a single nitro radical, and the imides, and the alkali-metal, ammonium, amine, copper, zinc, iron, lead, aluminum and calcium salts, and the methyl, ethyl, propyl, n-amyl, cyclohexyl, polyoxyethylene-ethyl, 2-phenoxyethyl, 2-chloroethyl, benzyl and phenyl esters of said acids, and a fungicidal adjuvant therefor, said adjuvant comprising a surface-active wetting agent.

2,763,589. Fungicidal Compositions of N-Phenylchlorophthalamic Acids and Derivatives Thereof and Method of Applying to Plants. Patent issued Sept. 18, 1956, to George E. O'Brien, Bethany, Allen E. Smith, Oxford, and Adelaide Bornmann, New Haven, Conn., assignors to U.S. Rubber Co., New York. A fungicidal composition comprising a compound selected from the group consisting of N-phenyl-chlorophthalamic acids and N-monosubstituted - phenyl-chlorophthalamic acids in which the substituent in the phenyl group attached to the nitrogen is selected from the group consisting of chloro, bromo, nitro, and hydroxy radicals and alkyl radicals having 1 to 4 carbon atoms, the chlorophthalamic group being unsubstituted except by 1 to 4 chloro radicals, and the imides, and the alkali-metal, ammonium, amine, copper, zinc, iron, lead, aluminum and calcium salts, and the methyl, ethyl, isopropyl, n-amyl, cyclohexyl, polyoxyethylene-ethyl, 2-phenoxyethyl, 2-chloroethyl, benzyl and phenyl esters of said acids, and a fungicidal adjuvant therefor, said adjuvant comprising a surface-active wetting agent.

2,763,698. Production of DDT. Patent issued Sept. 18, 1956, to Hugo Stange, Niagara Falls, N.Y., assignor to Olin Mathieson Chemical Corp., New York. In the production of DDT by chlorinating acetaldehyde to produce crude chloral containing water, dehydrating said crude chloral, and condensing the dehydrated chloral with an excess of chlorobenzene in the presence of sulfuric acid at a temperature of 0° to 40° C. to produce DDT, the improvement which comprises separating and recovering waste sulfuric acid containing chlorobenzene sulfonic acid from said DDT product, returning said recovered acids to the dehydrating step wherein said crude chloral is contacted with said waste sulfuric acid and chlorobenzenesulfonic acid to remove water from said crude chloral, separating said acids with absorbed water from the dehydrating step, treating the separated acids from said dehydrating step with steam at elevated temperatures to recover chlorobenzene and sulfuric acid, and returning said chlorobenzene and sulfuric acid to the condensing step.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of $25 must accompany each notice of opposition.

Trade marks described below were published in the September 25, 1956, issue of the Patent Office Official Gazette.

Carac, in expanded lower case letters, for fertilizer. Filed April 10, 1956, by the Carac Corp., Freeport, N.Y. First use July, 1953.

Fertidine, in capital letters, for soil bacteria activator and fertilizer. Filed April 10, 1956, by IBC Research Laboratories, New York. First use, Jan. 3, 1956.

Fertidyne, in capital letters for soil bacteria activator and fertilizer. Filed April 10, 1956, by IBC Research Laboratories, New York. First use, Jan. 3, 1956.

Comar, in extended caps and lower case letters, written within an oval, for soil bacteria activator and fertilizer. Filed April 12, 1956, by Comar Industries, Inc., New York. First use June 2, 1955.

Smirow, in capital letters, for tankage. Filed April 12, 1956, by Smith-Rowland Co., subsidiary of Smith-Douglass Co., Norfolk, Va. First use prior to 1931.

FS, in capital letters within rectangular shield, for fertilizers, including mixed fertilizers, superphosphate, and triple superphosphate. Filed April 19, 1956, by Illinois Farm Supply Co., Chicago. First use Aug. 1, 1955, on superphosphate.

The following trade marks were published in the Patent Office Gazette dated September 18, 1956.

MWM, capital letters within diamond-shaped shield, for trace element concentrates. Filed Jan. 9, 1956, by Mid-West Mineral Co., Quincy, Ill. First use June 7, 1955.

Bovung, in capital letters for cow manure base, a biological, physical and chemical soil improver. Filed Feb. 15, 1956, by Walker-Gordon Laboratory Co., Inc., Plainsboro, N.J. First use Jan. 13, 1933.

Rath Black Hawk, hand lettered design in connection with drawing of Indian, for fertilizer. Filed April 5, 1956, by Rath Packing Co., Waterloo, Iowa. First use in this form, Nov. 29, 1955.

Steamboat, in hand-lettered design within pilot-wheel drawing with picture of river steamer in center, for nitrogen-containing materials for use as fertilizers. Filed April 9, 1956, by Mississippi River Fuel Corp. (Mississippi River Cemical Co.), St. Louis, Mo. First use Dec. 20, 1955.

Chemical and Mineral Conference Scheduled for San Francisco in November

SAN FRANCISCO — The western chemical and mineral producing industries will hold a joint meeting at the Fairmont Hotel, San Francisco, on Nov. 9 to discuss their mutual dependence upon one another.

"The Chemical Requirements of the Western Mineral Processing Industry," and "The Mineral Requirements of the Western Chemical Processing Industry" will be the subjects of the two chief discussions of the day.

Sponsored by the San Francisco Chamber of Commerce, the conference will bring together representatives of the two industries from the eleven Western states. The principal objective will be to explore the relationships between them.

Raymon E. Byler, business manager of the Arthur D. Little Co., San Francisco, will discuss the first of the two subjects; and Fred Lohse, assistant manager, chemical division of the Kaiser Aluminum and Chemical Corp., Oakland, will discuss the second.

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of $9 per column inch.

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Chicago Office Staff Secretary Married

CHICAGO—Miss Edna Maier, for the last six years secretary in the Chicago office of The Miller Publishing Co., was married the evening of Sept. 22 to Thomas R. Dougall. The ceremony took place at St. Paul's Lutheran Church, Melrose Park, Ill., and a reception followed at the VFW Hall in Maywood. Following a three-week honeymoon, Mr. and Mrs. Dougall will return to Chicago Oct. 10, and Mrs. Dougall will return to work the following day.

RESIGNS SALES POST

KANSAS CITY—Jack P. Widlar, Kansas City, has resigned as special sales representative in the multiwall division of the Chase Bag Co.

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A NEW SERVICE for Advertisers and Agencies . . .

CROPLIFE does more than offer the only *weekly* advertising medium to advertisers and advertising agencies interested in reaching the agricultural chemical field. The complete services of Croplife's Home Office in Minneapolis and its full-time branch offices in New York, Chicago and Kansas City are available for the servicing of advertisers and agencies.

Requests for market information, statistical analyses, industry news tie-ins and other service will be handled by experienced full-time staff members of the company.

Working under the direction of Croplife's seasoned and experienced editors in the Minneapolis Home Office is the Advertiser Service Department, headed by a trained statistician and market research man who directs the work of a library and research staff of five persons.

Croplife's advertising sales staff includes full-time staff members in each branch office, with several years of experience in businesspaper advertising, whose first objective is to be of service to advertisers and agencies interested in the field served by Croplife. These representatives know agriculture thoroughly and their experience in industries and organizations serving the agricultural field qualifies them highly for their advertising sales and service assignments. Included in this wealth of experience are previous assignments with agricultural experiment stations, the United States Department of Agriculture and daily and weekly newspaper work in agricultural communities.

In the nation's capital, Croplife has its own Washington correspondent, a veteran capital newsman who interprets the Washington scene in terms of short and long range impact on the industry. In looking behind the government news releases he is able to report valuable information on trends and significant behind-the-scenes activities.

Croplife's foreign manager is alert to overseas developments of interest to the agricultural chemical industry and handles requests from advertisers and agencies for information and service on the foreign market.

Advertisers and advertising agencies interested in the agricultural chemical industry are invited to make use of this advertiser service program.

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